USER'S MANUAL

LCD PC

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Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the service representative or an experienced radio/TV technician for help.

Warning

Use only shielded cables to connect I/O devices to this equipment.
You are cautioned that changes or modifications not expressly approved by the manufacturer for compliance with the above standards could void your authority to operate the equipment.

IMPORTANT SAFETY INSTRUCTIONS

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electrical shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

CAUTION

Always disconnect all telephone lines from the wall outlet before servicing or disassembling this equipment.

USE THE APPROPRIATE 26AGW TELEPHONE LINE CORD

IMPORTANTES MESURES DE SÉCURITÉ

Certaines mesures de sécurité doivent être prises pendant l'utilisation de matérial téléphonique afin de réduire les risques d'incendie, de choc électrique et de blessures. En voici quelquesunes:

1. Ne pas utiliser l'appareil près de l'eau,, p.ex., près d'une baignoire, d'un lavabo, d'un évier de cuisine, d'un bac à laver, dans un sous-sol humide ou près d'une piscine.
2. Éviter d'utiliser le téléphone (sauf s'il s'agit d'un appareil sans fil) pendant un orage électrique. Ceci peut présenter un risque de choc électrique causé par la foudre.
3. Ne pas utiliser l'appareil téléphonique pour signaler une fuite de gaz s'il est situé près de la fuite.
4. Utiliser seulement le cordon d'alimentation et le type de piles indiqués dans ce manuel. Ne pas jeter les piles dans le feu: elles peuvent exploser. Se conformer aux règlements pertinents quant à l'émination des piles.

ATTENTION

Débranchez toujours toutes les lignes téléphoniques des prises murales avant de réparer ou de démonter cet équipement.

UTILISEZ LE CORDON DE TÉLÉPHONE 26AGW APPROPRIÉ

Instructions for Care and Operation

The computer is quite rugged, but it can be damaged. To ensure that does not happen, follow these suggestions:

1. **Don't drop it.** Make sure it's on a stable surface. If the computer falls, the case and other components could be damaged. Do not expose it to any shock or vibration.

2. **Don't overheat it.** Keep the computer and power supply away from any kind of heating element. Keep the computer out of direct sunlight. Don't store or use the computer in a humid environment. Do not place the computer on any surface which will block the vents.

3. **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.

4. **Keep it dry.** This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged. Do not leave it in a place where foreign matter or moisture may affect the system.

5. **Follow the proper working procedures for computer**. Shut-down the computer properly, and close all programs (Don't forget to save your work). Do not turn off any peripheral devices when the computer is on. Do not disassemble the computer by yourself. Perform routine maintenance on your computer.

6. **Take care when using peripheral devices**. Use only approved brands of peripheral devices. Unplug the power cord before attaching any peripheral device.

7. **Do not place anything heavy on the computer**.

Mainboard Battery Note

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Power Safety.

The computer has specific power requirements:

- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Before cleaning the computer, make sure it is disconnected from any external power supplies.
- Do not plug in the power cord if you are wet.
- Do not use the power cord if it is broken.
- Do not place heavy objects on the power cord.

Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel under any of the following conditions:

- When the power cord is damaged or frayed.
- If the computer has been exposed to rain or other liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.

Cleaning

Do not apply cleaner directly to the computer, use a soft clean cloth. Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.

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Chapter 1: Introduction

Overview

What this chapter covers:

- In the Box — the parts and pieces provided
- The Manual — how to use it
- Quick Start Guide — the minimum you need to know
- System Map — navigate around your computer

In the Box

The following should be in the box.

Figure 1 - 1
Box Contents

1. The LCD PC
2. Power Cord
3. Device Driver's & Utilities & User's Manual CD ROM (including this manual in Adobe Acrobat "PDF" format)
4. User's Manual

The Manual

This manual refers to the hardware and essential software required to run your computer. Depending on how your system is configured, some or all of the features described may already be set up.

Advanced Users

If you are an advanced user you may skip over most of this manual. However you may find it useful to refer to the **"Drivers & Utilities" on page 4 - 1**, **"BIOS Utilities" on page 5 - 1** and **"Upgrading The Computer" on page 6 - 1**. You may also find the notes marked with a ☑ of interest to you.

Beginners and Not-So-Advanced Users

If you are new to computers, or do not have an advanced knowledge of them, then you should try to look through all the documentation. Do not worry if you do not understand everything the first time. Keep this manual nearby and refer to it to learn as you go. You may find it useful to refer to the beginner's notes marked with a as indicated in the margin.

☑

Advanced Notes

Advanced users should check the light colored boxes with the mark above.

This is where you will find detailed information about the computer's features.

Beginners may refer to this area also, and you may be surprised how much you understand.

Warning Boxes

No matter what your level please pay careful attention to the warning and safety information indicated by the symbol. Also please note the safety and handling instructions as indicated in the *Preface*.

Not Included

Operating Systems (e.g. *Windows 98 Second Edition, Window Me, Windows 2000 Professional, Windows XP etc.*) have their own manuals as do applications (e.g. word processing, spreadsheet and database programs). If you have questions about the operating systems or programs then please consult the appropriate manuals.

System Software

Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find this manual refers to the following operating systems:

- Microsoft Windows 98SE
- Microsoft Windows Me - Millennium Edition
- Microsoft Windows 2000
- Microsoft Windows XP

Peripheral Devices

Please note that peripherals (printers, digital cameras, etc.) which attach to your computer by either **USB** or **IEEE1394** ports may be connected *after* Windows is up and running. All other peripherals must be connected *before* you turn on the system.

Quick Start Guide

This guide assumes that you are already familiar with computers and can tell at a glance what and where all the key components are. If you are not that comfortable with this type of device, then please refer to the following pages, which give an overview of the system.

It is still best to review these steps, *before* taking any action. If there is anything you are not sure about, then please refer to the appropriate chapter before continuing.

Unless you need to install an operating system your computer should be ready to work right out of the box. Before you begin please follow the safety instructions in the *Preface*.

1. Remove all packing materials, CD/DVDs, floppy disks, and any PC Cards.
2. Securely attach any peripherals you want to use with the computer (e.g. keyboard and mouse) to their ports.
3. Attach the AC power cord to the AC Power-In port on the right of the computer. Then plug the AC power cord into an outlet.
4. Push the power button to turn the computer “on”.

System Map

Your LCD PC has a lot of built-in features. Most of these are enabled by your operating system (OS). Further explanations of the various subsystems are covered in the chapter or pages indicated.

Getting To Know Your Computer

The following graphics will help you to become familiar with the basic functions, and to learn the location of the various ports and components of your computer.

Front View

1. LCD Panel
2. Speakers
3. FDD Activity LED
4. CD Device Activity LED
5. HDD Activity LED
6. Power LED
7. Power Button

Figure 1 - 1
Front View

LCD Panel

The LCD PC comes with a 15” LCD (Liquid Crystal Display) screen.

Stereo Speakers

The built-in speakers provide rich, stereo sound.

Disk Activity LED Indicators

These display the system’s operational status including the power status, and read/write activity on the floppy disk drive, hard disk drive and CD device.

Power LED Indicator

When the system is powered on and the operating system running the light will be solid green. When the system is in the **Standby** power saving mode, the light will flash orange. When the system is on Hibernate power saving mode the light will be off. (**See “Configuring the Power Button” on page 3 - 19**).

Shutdown

Please note that you should always shut your computer down by choosing the **Shut Down/Turn Off Computer** command from the **Start** menu in ***Windows.*** This will help prevent hard disk or system problems.

Power Button

Press this button to turn your computer on or off (**" Turning On The Computer" on page 2 - 4**). This button may also be used as a suspend/resume key, once configured as such, in the power management control panel of your operating system (**"Configuring the Power Button" on page 3 - 19**). The power LED will display the current power status of the computer.

Forced Off

If the system "hangs", and the **Ctrl** + **Alt** + **Del** key combination doesn't work, press the power button for **4 seconds** to force the system to turn itself off.

Left View

1. Floppy Disk Drive
2. CD Device
3. Hard Disk Drive (HDD) Bay

Figure 1 - 2
Left View

Drive Warning

Don't try to remove the hard disk (HDD) while the system is on. This could cause data loss or damage.

Unauthorized removal or tampering with the HDD may violate your warranty. If you are in doubt, consult your service representative.

Media Warning

Don't try to remove a floppy disk while the system is accessing it. This may cause the system to "crash".

CD Emergency Eject

If you need to manually eject a CD/DVD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole.

Do not use a sharpened pencil or similar object that may break and become lodged in the hole.

3.5” FDD (Floppy Disk Drive)

This is a 3.5”, 3-mode, 1.44 MB fixed floppy disk drive. For more information please refer to **“The Floppy Disk Drive (FDD)” on page 2 - 5**.

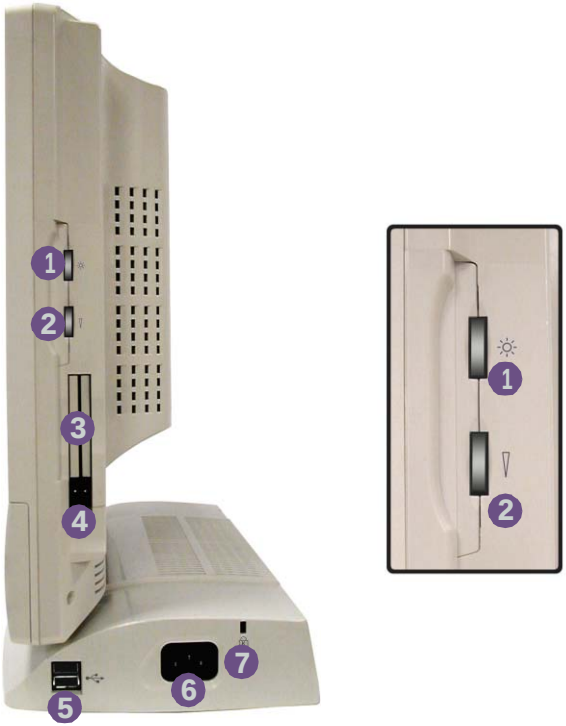
Hard Disk Drive

Please see **“Hard Disk Drive Upgrade” on page 6 - 3** for information on upgrading/replacing your hard disk drive (**See “Storage” on page A - 4**).

CD Device

A CD-ROM drive, OR DVD-ROM drive, OR CD-RW drive, OR Combination CD-RW and DVD-ROM drive (12.7mm height) is standard depending on the model you purchased. For more information on using the drive please refer to **“The CD/DVD Device” on page 2 - 6**.

Right View



1. LCD Brightness Control Knob
2. Volume Control Knob
3. Dual PC Card Slots
4. PC Card Eject Buttons
5. Dual USB Ports
6. AC Power-In Port
7. Kensington Lock Slot

Figure 1 - 3
Right View

LCD Brightness Control Knob

Adjust the brightness of the computer's LCD panel with this control.

Volume Control Knob

Adjust the sound from your audio source (CD or DVD) with this control.

Sound Volume Adjustment

How high the sound volume can be set using the volume control knob depends on the setting of the volume control within *Windows*. Click the **Speaker** icon on the taskbar (Or go to **Start>Programs>Accessories>Entertainment>Volume Control**) to check the setting.

All peripherals must be connected before you turn on the system.

Dual PC Card Slots

There are two Type-II PC card slots, or the slot may be used for one Type III PC card (PC cards were also previously referred to as PCMCIA). Refer to **"The PC Card Slot" on page 2 - 10** for more information on the PC Card slots.

Dual USB Ports

These ports are hardware interfaces for low-speed peripherals such as a keyboard, mouse, joystick, scanner, printer or telephony devices. Devices may be plugged into the computer, and unplugged from the computer, without the need to turn the system off (two more USB ports are located on the rear of the computer).

AC Power-In Port

To power your computer plug the supplied cable in here, then connect the other end to an AC power source.

Security Lock Slot

To prevent possible theft a Kensington-type lock can be attached to this slot. Locks can be purchased at most computer stores.

Rear View

1. Carrying Handle
2. Headphone-Out Jack
3. Line-In Jack
4. Microphone-In Jack
5. RJ-45 LAN Jack
6. RJ-11 Phone Jack
7. Dual USB Ports
8. Unpowered - IEEE 1394 Port
9. PS/2 Mouse & Keyboard Ports
10. Printer/Parallel Port
11. Serial Port
12. External Monitor (CRT) Port
13. Vents

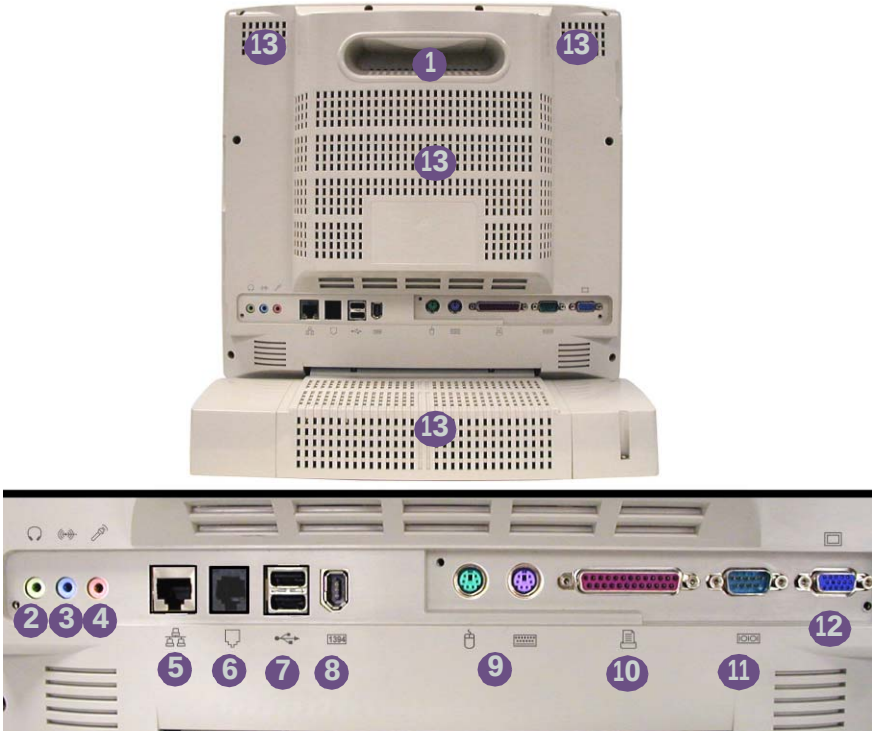


Figure 1 - 4
Rear View

Carrying Handle

The handle design allows for single-hand use provided that you have enough strength to move the machine with one hand. However, considering its weight, we strongly recommend you use both hands to move the machine (with one hand gripping the handle and the other gripping the base of the machine) to avoid accidentally dropping it, which might cause damage to the machine or yourself.

Headphone-Out Jack

Headphones or speakers may be connected through this jack.
Note: Set your system's volume to a reduced level before connecting to this jack.

Line-In Jack

Use this to connect external audio sources to play through your computer's speakers.

Microphone-In Jack

Record on your computer from audio sources plugged in to this jack.

RJ-45 LAN Jack

This port supports LAN (Network) functions. **Note**: Broadband (e.g. ADSL) modems usually connect to the LAN port.

RJ-11 Phone Jack

This port connects to the built-in modem. You may plug the telephone line directly into this RJ-11 telephone connection.
Note: Broadband (e.g. ADSL) modems usually connect to the LAN port.

Dual USB Ports

These ports are hardware interfaces for low-speed peripherals such as keyboard, mouse, joystick, scanner, printer and telephony devices. Devices may be plugged into the computer, and unplugged from the computer, without the need to turn the system off.

Unpowered - IEEE 1394 Port

This allows high speed connection to various peripheral devices, e.g. external disk drives and digital cameras (**See sidebar note)**.

IEEE 1394

The IEEE 1394 port only supports **SELF POWERED** IEEE 1394 devices.

PS/2 Type Mouse & Keyboard Ports

Connect an external PS/2 type mouse or keyboard to these ports.

Port Warning

The computer can only accept one keyboard at a time. Don't try to install a USB and a PS/2 keyboard at the same time. Doing so may cause resource conflicts and make the system unstable.

Printer/Parallel Port

This port supports ECP (Extended Capabilities Port) and EPP (Enhanced Parallel Port) modes (**See "Interface" on page A - 3**).

Serial Port

Connect a serial type mouse to this port.

External Monitor (CRT) Port

Connect an external CRT monitor to this port to allow dual video or simultaneous display on the LCD and external CRT monitor (**" Display Devices" on page 3 - 8**).

Overheating

To prevent your computer from overheating make sure nothing blocks the vent while the computer is in use.

Vent

This enables airflow to prevent the system from overheating.

Chapter 2: Using The Computer

Overview

To learn more about your computer, please read this chapter.

This chapter includes:

- Ergonomics
- Turning on the Computer
- The Disk Drives
- The CD/DVD Device
- The PC Card Slot
- Keyboard
- Mouse
- Printer (general guidelines)

Ergonomics

We designed your LCD PC system to be functional as well as attractive. To get most out of it, here are some suggestions on how to position and use the computer:

- The top third of the LCD (screen) should be at eye-level or slightly below.
- The LCD should be at least 18"/ 45cm. directly in front of you.
- If the screen resolution (e.g. 1024x768) makes you strain to read, change it: In *Windows* Control Panel, double-click **Display** (icon) and click **Settings** (tab). Then adjust the "Screen area" to something more comfortable (e.g. 800x600).
- Angle the LCD so that it doesn't reflect any light into your eyes.
- Use a chair which offers good back support (especially lower-back). The seat should allow your feet to rest flat on the floor or on a footrest directly in front of you.
- If possible, illuminate your work area with natural daylight or use a steady-glowing (non-flickering) light source.

- Place the keyboard and mouse so that your arms are at your sides and your forearms are roughly parallel to the floor. Your wrists should flex slightly downward as you work. Your neck and shoulders should also be relaxed.

- Take a break from the computer. Get up, stretch, flex your wrists, walk about, and look at something else for about 10 minutes every hour.

Turning On The Computer

Now you are ready to begin using your new computer. To turn it on simply press the power button on the front panel.

When the computer is on, you can use the power button as a hot-key button when it is pressed for less than **4 seconds**. Use **Power Management** or **Power Options**) in the "*Windows*" Control Panel to configure this feature.

Power Button as Standby or Hibernate Button

If you are using an ACPI-compliant OS, such as *Windows 98SE*, *Windows Me, Windows 2000 Professional* or *Windows XP* the power button can be designated as **Standby** or **Hibernate** within the OS's "Power Management" or "Power Options" subsystem (See your OS's documentation, or **"Configuring the Power Button" on page 3 - 19** for details.)

Forced Off

If the system "hangs", and the **Ctrl** + **Alt** + **Del** key combination doesn't work, press the power button for **4 seconds,** or longer**,** to force the system to turn itself off.

The Disk Drives

The Hard Disk Drive (HDD)

The hard disk drive is used to store your data in the computer and is accessible from the bay on the left of your computer (**See "Left View" on page 1-11**). For further details on removing and inserting the hard disk see **"Hard Disk Drive Upgrade" on page 6 - 3**.

The Floppy Disk Drive (FDD)

The computer is equipped with a fixed 1.44 MB, 3.5" floppy disk drive module. By default it is drive "**A:**" and can be used as a boot device if properly set in the **BIOS** (**Refer to "Boot Menu" on page 5 - 17**).

Inserting/Removing Floppy Disks

When using the floppy drive, always insert your floppy diskette with the label-side facing the front of the machine. To remove the inserted diskette, press the eject button at the bottom-left corner of the floppy drive.

Power Safety

Before attempting to access any of the internal components of your computer please insure that the machine is turned off and not connected to the AC power.

Media Warning

Don't try to remove a floppy diskette while the system is accessing it. This may cause the system to "crash".

Sound Volume Adjustment

How high the sound volume can be set using the volume control knob depends on the setting of the volume control within *Windows*. Click the **Speaker** icon on the taskbar to check the setting.

The CD/DVD Device

Your machine will have a bay for the optional CD-ROM drive, OR DVD-ROM drive, OR CD-RW drive, OR Combination CD-RW and DVD-ROM drive. The CD Device is usually labeled drive **D:** and may be used as a boot device if properly set in the **BIOS** (**"Boot Menu" on page 5 - 17**).

Figure 2 - 1
CD Device

1. Open Button
2. Busy Indicator
3. Emergency Eject Hole

Loading Compact Discs

To insert a CD/DVD disc, press the open button and carefully place a CD/DVD disc onto the disc tray with label-side facing forward (Use just enough force to click onto the tray's spindle). Gently push the CD/DVD tray in until its lock "clicks" and you are ready to start. The busy indicator will light up while data is being accessed, or

while an audio/video CD, or DVD, is playing. If power is unexpectedly interrupted, insert an object such as a straightened paper clip into the emergency eject hole to open the tray.

Handling CDs or DVDs

Proper handling of your CDs/DVDs will prevent them from being damaged. Please follow the advice below to make sure that the data stored on your CD-ROM / DVD-ROM discs can be accessed.

Remember to:

- Hold the CD or DVD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disc.
- Do not store or place the CD or DVD in high-temperature areas.
- Do not use benzene, thinner, or other cleaners to clean the CD or DVD.
- Do not bend the CD or DVD.
- Do not drop or subject the CD or DVD to shock.

CD Emergency Eject

If you need to manually eject a CD (e.g. due to an unexpected power interruption) you may push the end of a straightened paper clip into the emergency eject hole.

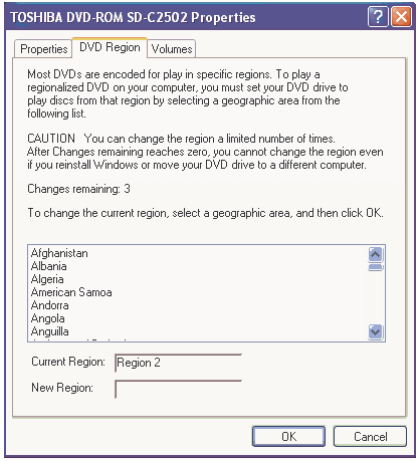
Media Warning

When manually ejecting a CD/DVD disc, DO NOT use a sharpened pencil or similar object which may break, and become lodged in the hole.

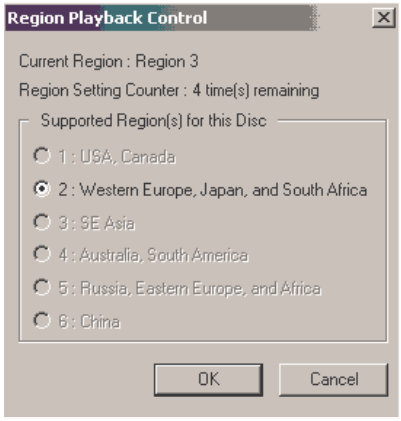
DVD Regional Codes

DVD region detection is device dependent, not OS-dependent. You can select your module's region code **5** times. The fifth selection is permanent. This cannot be altered even if you change your operating system or you use the module in another computer.

Figure 2 - 2
DVD Regional Codes


TOSHIBA DVD-ROM SD-C2502 Properties
Properties
DVD Region
Volumes
Most DVDs are encoded for play in specific regions. To play a regionalized DVD on your computer, you must set your DVD drive to play discs from that region by selecting a geographic area from the following list.
CAUTION: You can change the region a limited number of times. After Changes remaining reaches zero, you cannot change the region even if you reinstall Windows or move your DVD drive to a different computer.
Changes remaining: 3
To change the current region, select a geographic area, and then click OK.
Afghanistan
Albania
Algeria
American Samoa
Andorra
Angola
Anguilla
Current Region: Region 2
New Region:
OK
Cancel

Windows XP


Region Playback Control
Current Region : Region 3
Region Setting Counter : 4 time(s) remaining
Supported Region(s) for this Disc
1 : USA, Canada
2 : Western Europe, Japan, and South Africa
3 : SE Asia
4 : Australia, South America
5 : Russia, Eastern Europe, and Africa
6 : China
OK
Cancel

Application

Changing the Regional Codes

Go to the **Control Panel** in *WindowsXP/2000* and double-click **System**, click **Device Manager**, then click the + Next to **DVD/CD-ROM drives**. Double-click on the DVD-ROM device to bring up the **Properties** menu, and select the **DVD Region** (tab) to bring up the control panel as seen in **"DVD Regional Codes" on page 2 - 8** (See sidebar note).

DVD Regional Coding	
Region	**Geographical Location**
1	USA, Canada
2	Western Europe, Japan, South Africa, Middle East & Egypt
3	South-East Asia, Taiwan, South Korea, The Philippines, Indonesia, Hong Kong
4	South & Central America, Mexico, Australia, New Zealand
5	Russia, Eastern Europe, India & Most of Africa
6	China

Changing Region Codes in Windows 98/Me

If you are using *Windows 98* or *Windows Me* then you will need to use your DVD software player to change the region code.

Insert the DVD and then run your software DVD application. The application should then detect that the DVD is from a different region than that assigned by your device.

Table 2 - 1
DVD Regional Coding

The PC Card Slot

The computer is equipped with **two** PC Card slots for type II PC Cards. You can also insert **one** type III PC Card. Type III PC Cards only fit into the **rear** socket.

Inserting And Removing PC Cards

- Align the PC Card with the slot and push the Card in until it locks into place.
- To remove a PC Card, simply press the eject button next to the slot.

Keyboard

You can connect a keyboard through either of the following types of ports:

- PS/2 keyboard port (at the rear of the computer)
- USB ports (two at the rear and two on the right of the computer)

Note: Only connect one keyboard to the computer at any time to avoid resource conflicts and system instability.

Figure 2 - 3
Keyboard Ports

1. PS/2 Keyboard Port
2. USB Ports

Special Characters

Some software applications allow the number-keys to be used with **Alt** to produce special characters. These special characters can only be produced by using the **numeric keypad** (usually on the right of the keyboard). The regular number keys will not work. Make sure that **NumLock** is on.

Mouse Driver

If you are using an external mouse your operating system may be able to auto-configure your mouse during its installation or only enable its basic functions. Be sure to check the device's user documentation for details.

Mouse

You can also add a mouse to your computer through any of the following ports:

- The PS/2 port at the rear of the computer
- Four USB ports, two on the right, and two at the rear of the computer.
- The serial port at the rear of the computer

Note: Only connect one mouse to the computer at any time to avoid resource conflicts and system instability.

Figure 2 - 4
Mouse Ports

1. PS/2 Mouse Port
2. USB Ports
3. Serial Mouse Port

Adding a Printer

The most commonly used peripheral is a printer. The following conventions will help you to add a printer, however it is always best to refer to the printer manual for specific instructions and configuration options.

USB Printer

Most new printers have a USB interface connection. There are four USB ports on your computer and you may use any one of the ports to connect the printer.

Install Instructions:

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.).
2. Turn ON the printer.
3. Turn ON the computer.
4. Connect the printer's USB cable to one of the USB ports on the computer.
5. *Windows* will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Parallel to USB Converter Note

If you are using a Parallel to USB converter, follow the USB installation instructions on page **2 - 13**.

Parallel Printer

This is still the most common type of printer. A **Parallel** to **USB** converter may be purchased at most computer stores.

Install Instructions:

1. Set up the printer according to its instructions (unpacking, paper tray, toner/ink cartridge etc.)
2. Attach the parallel cable to the printer.
3. Connect the printer's parallel cable to the printer/parallel port at the rear of the computer.
4. Turn ON the printer.
5. Turn ON the computer.
6. *Windows* will identify the printer and either load one of its own drivers or ask you to supply one. Follow the on-screen instructions.

Chapter 3: Advanced Controls

Overview

This chapter covers:

- Advanced video controls
- Power management features

Drivers

You are unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to **"What To Install" on page 4 - 2,** for installation instructions.

Advanced Video Controls

This section is about making adjustments for the LCD, and switching display devices.

Make sure you have installed the video driver or all the options listed on the following pages will not be available to you (**see "What To Install" on page 4 - 2**).

Video Driver Controls

The video interface lets you change the screen resolution and color output to whatever is most comfortable/efficient for you. This is a matter of hardware, video memory and the driver for your operating system. The driver interface shows the available options.

You can switch display devices from the Display Properties control panel in *Windows* as long as the **video driver is installed** (**“What To Install” on page 4 - 2**).

Refresh Rates

The standard refresh rate for all LCD panels is **60Hz**. There is no need to adjust this.

Making Adjustments For The LCD

With the video driver installed, the LCD is capable of supporting a resolution of 1024X768 at 60Hz. The higher the resolution, the more information the LCD can display on screen. To change the LCD's **resolution** and **color depth** go to the **Display Properties** control panel.

1. Click **Start**, point to **Settings** and click **Control Panel**.
2. Double-click **Display** (icon).
3. In the **Display Properties** dialog box, click **Settings** (tab).
4. In **Screen area/resolution** move the slider to the preferred setting.
5. In **Colors/Color quality**, click the arrow and scroll to the preferred setting for **color depth**.

You can also access **Display Properties** by right-clicking the **ATI** icon in the taskbar. Point to **Settings** and click **Display Settings**, then click the **Settings** (tab).

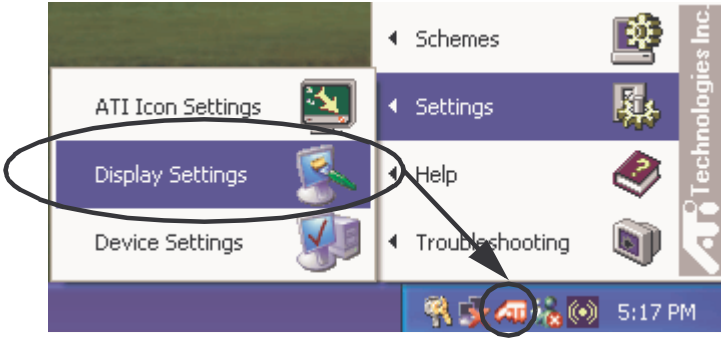


Figure 3 - 1
ATI Display Settings Menu

Note: The **ATI** icon will only appear in the taskbar if you have installed the video driver (**see "What To Install" on page 4 - 2**).

Windows XP

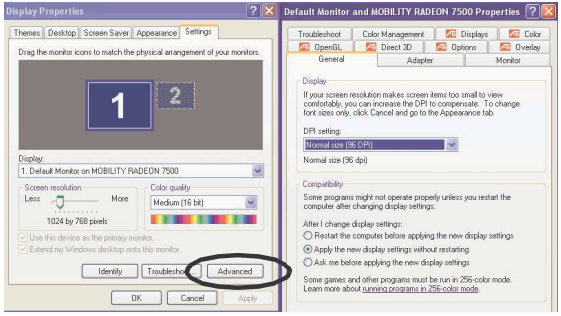
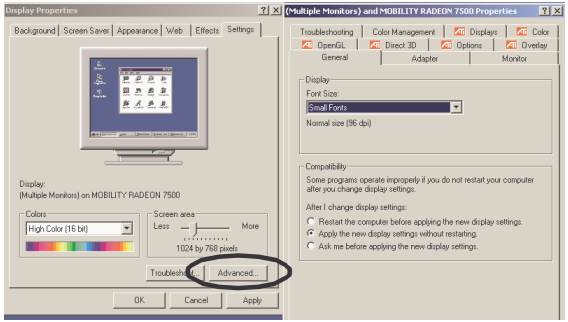


Figure 3 - 2
Advanced Display Properties

Windows 2000



When the Display Properties control panel is open click the **Advanced** (button) to bring up the options tabs. Clicking through these tabs allows you to make any video adjustments you require.

Access the menus from ATI taskbar to get further help on display options. Right-click the **ATI** icon in the taskbar and point to **Help** or **Troubleshooting** (**Figure 3 - 3**).

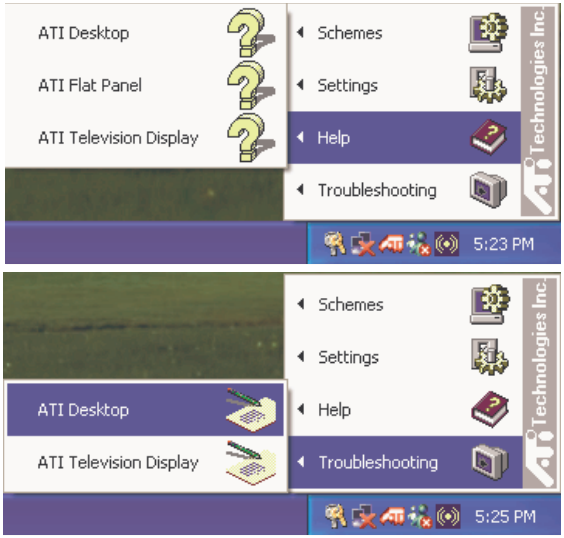


Figure 3 - 3
ATI Help & Troubleshooting

Drivers

You are unable to use most advanced controls until the necessary drivers and utilities are properly installed. If your system hasn't been properly configured (your service representative may have already done that for you), refer to **"What To Install" on page 4 - 2,** for installation instructions.

Vertical Refresh Rate

The vertical refresh rate of your CRT is important. If it is too low and/or you're using fluorescent lighting, the screen will appear to flicker. To reduce flickering on a CRT, use faster refresh rates (we recommend a refresh rate of 72Hz or more). But first check your monitor's documentation to make sure it can support the rates listed by the video driver. The default refresh rate for VGA monitors (without drivers) is 60Hz.

Display Devices

Besides the built-in LCD, you can also use an external monitor (CRT) connected to the External Monitor (CRT) port as your display device.

Attaching a Monitor (CRT)

If you prefer to use a monitor (CRT), connect it to the External Monitor (CRT) port on the rear panel (**See Chapter 1:"Rear View" on page 1 - 16**).

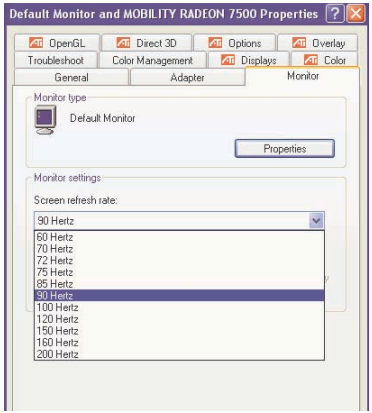


Figure 3 - 4
Monitor (CRT) Properties

Display Options

Display Mode	Windows 98SE, Me & XP	Windows 2000
Single	✓	✓
Multiple - **Clone** Mode	✓	✓
Multiple - Extended Desktop Mode	✓	Not Available
Single - Either the LCD or CRT as a display device **Multiple (Clone)** - The LCD & CRT outputting the same view (you can apply different display modes with different resolutions and refresh rates) **Multiple** (**Extended Desktop)** - The LCD and CRT outputting a different view (In *Windows 98SE, Windows Me and Windows XP* only) **– "Extended Desktop Mode" on page 3 - 12**).		

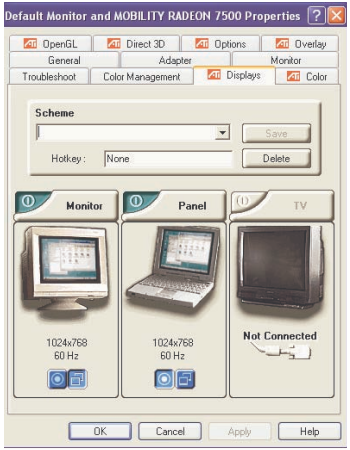
Table 3 - 1
Display Options

Firstly the display devices must be **enabled**, then configured to your requirements.

Enabling Other Displays

In the **Advanced** ATI Mobility Radeon Properties (**Figure 3 - 2 on page 3-6**) click on **Displays** to get the display options (The "TV" option is not supported). Different OS's will appear with different options. Click the **enable/disable button** for the display device you wish to use. Select one display as **Primary**, the remaining may operate in either **Clone Mode**, or **Extended Desktop Mode**.

Figure 3 - 5
Displays Tab



Clone Mode

Clone Mode simply shows an exact copy of the **Primary** display desktop on the other display(s). This mode will drive multiple displays with the same content. Use this feature to display the screen through a projector for a presentation. Each display device can be configured independently as this allows you to set the options for overhead projectors etc., which require specific resolutions and refresh rates.

Extended Desktop Mode

The system supports **Extended Desktop** (The LCD and a CRT showing different views) in multiple display environments in ***Windows 98SE, WindowsMe*** and ***WindowsXP***, but this mode is **NOT** supported in ***Win2000***. An Extended Desktop creates a desktop spanning multiple displays and acts as a large workspace.

To get this effect:

1. Attach your external monitor to the External Monitor (CRT) port, and turn it on.
2. Go to the Advanced Display Settings (**See "Advanced Video Controls" on page 3 - 2**).
3. Select the **Displays** tab (**See "Displays Tab" on page 3 - 10**).
4. Click the **enable/disable button** for the display device you wish to use.
5. Click **Apply** and an image will appear on the display device (give the monitor a few seconds for the image to refresh).
6. Click **Yes** to accept the settings and **OK** to save the changes.
7. Use the **Display Properties** window to select the second monitor by clicking on the icon, or select it from the "**Display:**" pop-up menu.
8. Click "**Extend my Windows desktop onto this monitor**."

9. Use the **Display Properties** control panel to drag the monitors to match the physical arrangement you wish to use.
10. In the example shown in **Figure 3 - 6** the primary monitor "**1**" is on the right, the other display is on the left.

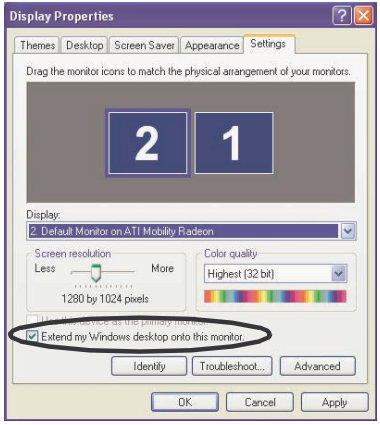


Figure 3 - 6
Extended Desktop Monitor Arrangement

11. With the **Extended Desktop Mode** enabled, drag any icons or windows across to the other display desktop. It is therefore possible to have one program visible in one of the monitors, and a different program visible in the other monitor.
12. Further help is available through the menus accessed from the taskbar (**See "ATI Help & Troubleshooting" on page 3 - 7**).

Operating System Power Management

Power management functions will vary slightly depending on your operating system. For more information it is best to refer to the user's manual of your operating system.

Power Management Features

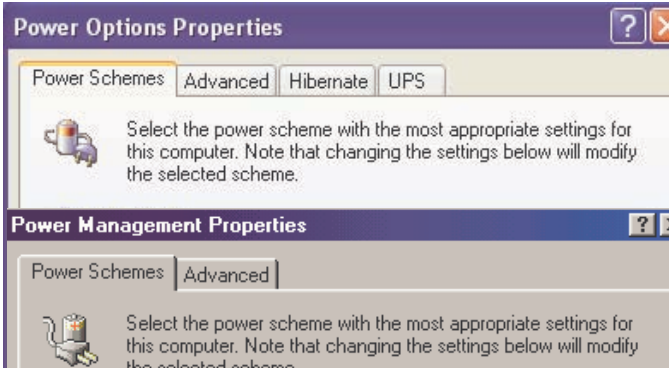
The system supports various ACPI-compliant (Advanced Configuration and Power Interface) power management features. You can use them to reduce the power consumption.
Windows 98 Second Edition, *Windows Me* and *Windows 2000 Professional* and *Windows XP* are ACPI-compliant operating systems.

In this section, we will give you an overview of the power management options the system can offer.
Using some form of power management greatly increases the lifespan of the LCD.

Enabling Power Management/Options

The power management/options are enabled through the Control Panel in your *Windows* system (**Power Management** in *Windows 98SE*, and **Power Options** in the *Windows ME, 2000* and *XP)*. With other Operating Systems you may have power management available so check your documentation.

Windows XP


Power Options Properties
Power Schemes
Advanced
Hibernate
UPS
Select the power scheme with the most appropriate settings for this computer. Note that changing the settings below will modify the selected scheme.
Power Management Properties
Power Schemes
Advanced
Select the power scheme with the most appropriate settings for this computer. Note that changing the settings below will modify

Windows 98SE

Figure 3 - 7
Power Management/ Options

You may conserve power through individual components or throughout the whole system.

Conserving Power Through Individual Components

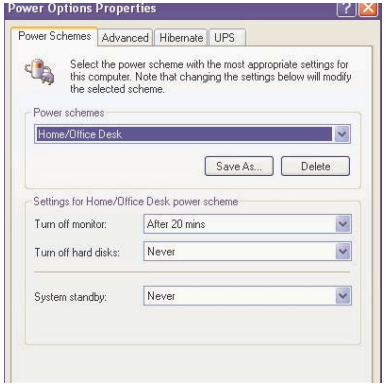
Monitor Standby

To conserve power, you can set the monitor to turn off after a specified time.

Hard Disk Standby

The computer's hard disk motor will be turned off if the hard disk drive has not been accessed for a specified period of time. If the system reads or writes data, the hard disk motor will be turned back on.

Figure 3 - 8
Power Schemes



Conserving Power Throughout The Whole System

With this function you can stop the computer's operation and restart where you left off. This system features **Standby** and **Hibernate** suspend mode levels (**Hibernate** mode will need to be enabled by clicking the option in the **Hibernate** tab in the control panel).

Hibernate Mode in Windows 98SE

Hibernate mode is **unavailable** in Windows 98SE.

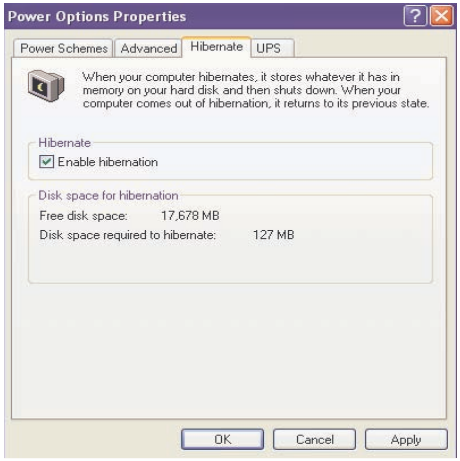

Power Options Properties
Power Schemes
Advanced
Hibernate
UPS
When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.
Hibernate
Enable hibernation
Disk space for hibernation
Free disk space: 17,678 MB
Disk space required to hibernate: 127 MB
OK
Cancel
Apply

Figure 3 - 9
Enable Hibernate

Hibernate Mode in Windows 98SE

Hibernate mode is **unavailable** in Windows 98SE.

Hibernate Mode vs. Shutdown

"Hibernate Mode" and "Shutdown" are the same in that the system is off and you need to press the power button to turn it on. Their main difference is:

When you come back from hibernation, you can return to where you last left off (what was on your desktop) without reopening the application(s) and file(s) you last used.

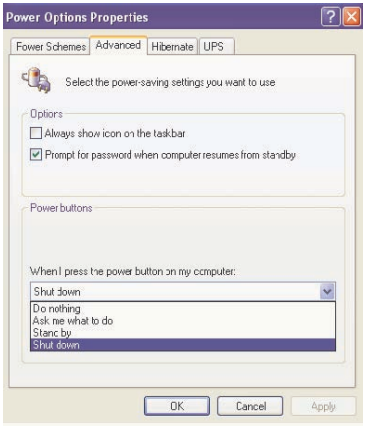
You can use either method depending on your needs.

Standby Mode vs. Hibernate Mode

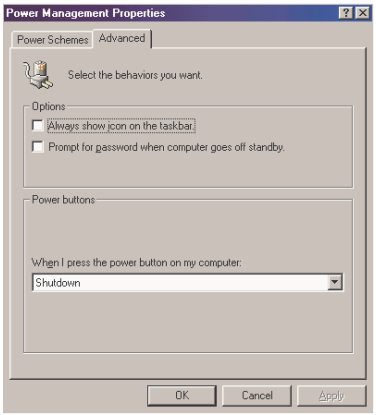
If you want to stay away from your work for just a while, you can put the system on standby instead of in hibernation. It takes a longer time to wake up the system from Hibernate Mode than from Standby Mode.

Configuring the Power Button

The power button may be set to send the computer in to either **Standby** or **Hibernate** modes (**Figure 3 - 10**). In **Standby** mode the power LED will flash orange, in **Hibernate** mode the LED will be off. If you are in a power saving mode set to save power through individual components (e.g. hard disk, monitor), the LED will remain green.



Windows XP



Windows 98SE

Figure 3 - 10
Advanced Power Options

Resuming From Power Saving Modes

The system can resume from power saving through individual components such as the hard disk or monitor by either pressing a key on the keyboard, or by moving the mouse. While in these modes the power LED will remain green.

To get the system to resume from **Standby** or **Hibernate Mode** you will need to press the power button.

Chapter 4: Drivers & Utilities

Overview

This chapter deals with installing the drivers and utilities essential to the operation or improvement of some of the LCD PC's subsystems. The system takes advantage of some newer hardware components for which the latest versions of most available operating systems haven't built in drivers and utilities. Thus, some of the system components won't be auto-configured with an appropriate driver or utility during operating system installation. Instead, you need to manually install some system-required drivers and utilities. In this chapter, we group driver and utility installation instructions by operating system. The following operating systems are covered.

- *Windows 98 Second Edition*
- *Windows Me*
- *Windows 2000 Professional*
- *Windows XP*

Assumption

We assume that you will install all drivers and utilities from the built-in CD device and it is assigned to **Drive D:** In addition, all file extensions can be seen [**See page 4 - 2 Navigate (Browse...) to D:**]

What To Install

The ***Device Drivers & Utilities + User's Manual CD-ROM*** contains the drivers and utilities necessary for the proper operation of the LCD PC. The table **"Install Order" on page 4 - 4** lists what you need to install manually according to your choice of the operating system.

You should install the drivers in the following order:

1. Chipset
2. Audio
3. Video
4. LAN
5. Modem

All other drivers may follow in any order you wish, however **it is very important that these 4 drivers are installed in the order indicated above**.

Navigate (Browse...) to D:

You will notice that many of the instructions for driver installation require you to **Navigate (Browse) to D:**

In this case D: is the drive specified for your CD device. Not all computers are setup the same way, and some computers have the CD listed under a different drive letter - e.g. if you have two hard drives (or hard disk partitions) one may be designated as drive C: and the other as D: In this case the CD device may be designated as drive E: - Please make sure you are actually navigating to the correct drive letter for the CD device.

When you click the **Browse** (button) after clicking **Run** in the **Start** menu you will see the "**Look in:**" dialog box at the top of the **Browse** window. Click the scroll button to navigate to **My Computer** to display the devices and drive letters.

Authorized Driver Message

If you receive a message telling you that the driver you are installing is not authorized (**Digital Signature Not Found)**, just click **Yes** or **Continue Anyway** to ignore the message and continue the installation procedure.

You will receive this message in cases where the driver has been released after the version of *Windows* you are currently using. All the drivers provided will have already received certification for *Windows*.

Version Conflict Message

During driver installation if you encounter any "file version conflict" message, please click **Yes** to choose to keep the existing (newer) version.

Install Order

Feature	Win98SE	WinME	Win 2000	Win XP
Chipset	page 5	page 10	page 14	page 18
Audio	page 6	page 10	page 14	page 18
Video	page 6	page 11	page 15	page 18
LAN	page 7	page 11	page 15	page 19
Modem	page 8	page 12	page 16	page 20
Wireless LAN	page 9	page 13	page 17	page 21

Table 4 - 1
What to Install

Windows 98 Second Edition

This section covers driver and utility installation instructions for *Windows 98 Second Edition*.

What To Have Ready

In some cases when drivers are to be installed you will need to have present your **OS CD** - *Windows 98 Second Edition*.
If prompted you may swap your *Device Drivers & Utilities + User's Manual CD-ROM* with your OS CD-ROM and back again when required.

Chipset (Win98SE)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Chipset\Setup.exe** and click **OK**.
3. When the *Setup* window appears click **Next** > **Yes** > **Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. *Windows* will then tell you "**New Hardware Found**" and begin to install the drivers for you.
6. Click **Next** when you see the *Add New Hardware Wizard*.
7. Select "**Search for the best driver for your device**" and click **Next**.
8. Make sure there are **no** locations selected (the tick boxes should be **blank**) and click **Next** > **Next** > **Finish**.
9. *Windows* will then pick up the drivers for you automatically and install to the proper location. Click **Yes** to restart the computer.

Audio (Win98SE)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Audio\Setup.exe** and click **OK**.
3. When the *Setup* window appears click **Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. On restart *Windows* will then tell you "**New Hardware Found**" and begin to install the drivers for you.
6. When you are prompted *'**please insert the disk labeled "Windows 98 Second Edition CD-ROM" and then click OK**'* eject the CD-ROM in your drive and insert the *Windows CD.*
7. Give the computer a few seconds to recognize that the disk is in the drive, then click **OK** (Click **Yes** if asked if you want to keep an existing file).
8. You may check the **Sounds** control panel (**Start** Menu and point to **Settings** and click **Control Panel** then double-click the **Sounds** icon) and select one of the sounds marked with a speaker to preview. You will see the **Sound Effect Manager** appear in the **Task Bar** alongside the date.

Video (Win98SE)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK**.
3. To continue click **Next > Yes**.
4. Click the **Express** button.
5. Click **Finish** to restart *Windows* when the *Setup Complete* box appears.

LAN (Win98SE)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Device Manager** (tab).
2. Click "+" next to **Other devices** (if its sub items are not shown).
3. Double-click **PCI Ethernet Controller** and click **Reinstall Driver** (button).
4. When the *Update Device Driver Wizard* appears click **Next** and select "**Search for a better driver than the one your device is using now (Recommended)",** then click **Next** again.
5. Select ONLY "**Specify a location:"**, navigate (**Browse...**) to **D:\Drivers\LAN\WIN98** and click **OK** > **Next** > **Next**.
6. When you are prompted *'**please insert the disk labeled "Windows 98 Second Edition CD-ROM" and then click OK**'* eject the CD-ROM in your drive and insert the *Windows CD*.
7. Give the computer a few seconds to recognize that the disk is in the drive, then click **OK**.
8. Click **Finish > Yes** to restart your computer when prompted.
9. The network adapter is now ready for configuration.

Modem (Win98SE)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Device Manager** (tab).
2. Click "+" next to **Other devices** (if its sub items are not shown).
3. Double-click **PCI Card** and click **Reinstall Driver** (button).
4. When the *Update Device Driver Wizard* appears click **Next** and select "**Search for a better driver than the one your device is using now. (Recommended)",** then click **Next** again.
5. Select ONLY "**Specify a location"**, navigate (**Browse...**) to **D:\Drivers\Modem\WIN98** and click **OK** > **Next** > **Next**.
6. Click **Finish**, and close the open windows.
7. The modem is ready for dial-up configuration.

Modem Country Selection

Be sure to check if the modem country selection is appropriate for you. (**Control Panel** >**Modem Settings** (icon) > **Country**).

Wireless LAN (Win98SE)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\DRIVERS\WLAN\SETUP.EXE** and click **OK**.
3. Click **Next > Yes**.
4. When the installation is finished, click **Finish** to restart your computer.
5. After the computer changes the system settings (allow some time for the computer to do this) click **Yes** to restart the computer again.

Windows ME

This section covers driver and utility installation instructions for *Windows Me*.

Chipset (WinME)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse.**) to **D:\Drivers\Chipset\Setup.exe** and click **OK**.
3. When the *Setup* screen appears click **Next** > **Yes > Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. When the computer restarts the *Add New Hardware Wizard* will appear, select "**Automatic search for a better driver (Recommended)**" and click **Next**.
6. Click **Finish**.

Audio (WinME)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Audio\Setup.exe** and click **OK**.
3. When the *Setup* window appears click **Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. You may check the **Sounds and Multimedia** control panel (**Start** Menu and point to **Settings** and click **Control Panel** then double-click the **Sounds and Multimedia** icon) and select one of the sounds marked with a speaker to preview. You will see the **Sound Effect Manager** appear in the **Task Bar** alongside the date.

Video (WinME)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK**.
3. To continue click **Next > Yes**.
4. Click the **Express** button.
5. Click **Finish** to restart *Windows* when the *Setup Complete* box appears.

LAN (WinME)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Device Manager** (tab).
2. Click "+" next to **Network adapters** (if its sub items are not shown).
3. Double-click **Realtek RTL8139(A)-based PCI Fast Ethernet Adapter**.
4. Click the **Driver** (tab) and click the **Update Driver** (button).
5. When the *Update Device Driver Wizard* appears, select "**Specify the location of the driver (Advanced)**" and click **Next**.
6. Make sure that you have selected "**Search for a better driver than the one your device is using now (Recommended)**".
7. Select ONLY (make sure the other boxes do not have a tick inside them) "**Specify a location:"**, and navigate (**Browse...**) to **D:\Drivers\LAN\WINME**.
8. Click **OK** > **Next > Next**.
9. Click **Finish** and **Yes** to restart your computer when prompted.
10. The network adapter is now ready for configuration.

Modem (WinME)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Device Manager** (tab).
2. Click "+" next to **Other devices** (if its sub items are not shown).
3. Double-click **PCI Card** and click **Reinstall Driver** (button).
4. When the *Update Device Driver Wizard* appears, select "**Specify the location of the driver (Advanced)"** then click **Next**.
5. Make sure that you have selected "**Search for a better driver than the one your device is using now. (Recommended)**".
6. Select ONLY (make sure the other boxes do not have a tick inside them) "**Specify a location:"**, and navigate (**Browse...**) to **D:\Drivers\Modem\WINME**
7. Click **OK** > **Next** > **Next**.
8. When the *Add New Hardware Wizard* appears you will need to repeat Steps **4** through **7**.
9. Click **Finish** in both wizards and close the open windows.
10. The modem is ready for dial-up configuration.

Modem Country Selection

Be sure to check if the modem country selection is appropriate for you. (**Control Panel** >**Modem Settings** (icon) > **Country**).

Wireless LAN (WinME)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\DRIVERS\WLAN\SETUP.EXE** and click **OK**.
3. Click **Next > Yes**.
4. When the installation is finished, click **Finish** to restart your computer.
5. After the computer changes the system settings (allow some time for the computer to do this) click **Yes** to restart the computer again.

Windows 2000 Professional

This section covers driver and utility installation instructions for *Windows 2000 Professional*.

Chipset (Win2000)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Chipset\Setup.exe** and click **OK**.
3. When the **Setup** window appears press **Next > Yes > Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. The driver is now installed.

Audio (Win2000)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Audio\Setup.exe** and click **OK**.
3. When the *Setup* window appears press **Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. You may check the **Sounds and Multimedia** control panel (**Start** Menu and point to **Settings** and click **Control Panel** then double-click the **Sounds and Multimedia** icon) and select one of the sounds marked with a speaker to preview. You will see the **Sound Effect Manager** appear in the **Task Bar** alongside the date.

Video (Win2000)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK**.
3. To continue click **Next > Yes**.
4. Click the **Express** button (Click **Yes** if asked if you want to continue at any time).
5. Click **Finish** to restart *Windows* when the *Setup Complete* box appears.

LAN (Win2000)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Hardware** (tab) > **Device Manager** (button).
2. Click "+" next to **Network adapters** (if its sub items are not shown).
3. Double-click **Realtek RTL8139(A)-based PCI Fast Ethernet Adapter** and click **Driver** (tab).
4. Click **Update Driver** (button).
5. When the *Upgrade Device Driver Wizard* appears, click **Next**.
6. When *Install Hardware Device Drivers* appears, select "**Search for a suitable driver for my device (recommended)**" and click **Next**.
7. When the *Locate Driver Files* window appears, select ONLY "**Specify a location"** and click **Next.**
8. Navigate (**Browse...**) to **D:\Drivers\LAN\WIN2000** and select the visible file by clicking it.
9. Click **Open** (button) and click **OK** (button), then click **Next.**
10. Click **Finish** and close the open windows.
11. The network adapter is now ready for configuration.

Modem (Win2000)

1. Click **Start** (menu), point to **Settings** and click **Control Panel**. Double-click **System** (icon) and then click **Hardware** (tab) > **Device Manager** (button).
2. Click "+" next to **Other devices** (if its sub-items are not shown).
3. Double-click **PCI Device** and click **Reinstall Driver** (button).
4. When the *Upgrade Device Driver Wizard* appears, click **Next**.
5. When *Install Hardware Device Drivers* appears, select "**Search for a suitable driver for my device (recommended)**" and click **Next**.
6. When the *Locate Driver Files* window appears, select ONLY "**Specify a location"** and click **Next.**
7. Navigate (**Browse...**) to **D:\Drivers\Modem\WIN2000** and select the visible file by clicking it.
8. Click **Open** (button) and click **OK** (button), then click **Next** (Click **Yes** if asked if you want to continue at any time).
9. Click **Finish**, and close the **Modem Properties** window.
10. The modem is ready for dial-up configuration.

Modem Country Selection

Be sure to check if the modem country selection is appropriate for you. (**Control Panel** >**Modem Settings** (icon) > **Country**).

Wireless LAN (Win2000)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\WLAN\SETUP.EXE** and click **OK**.
3. Click **Next > Yes** (Click **Yes** if asked if you want to continue at any time).
4. When the installation is finished, click **Finish** to restart your computer.

Windows XP

This section covers driver and utility installation instructions for ***Windows XP***.

Chipset (WinXP)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Chipset\Setup.exe** and click **OK**.
3. When the *Setup* window appears click **Next > Yes > Next.**
4. Click **Finish**.
5. The driver is now installed.

Audio (Win XP)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Audio\Setup.exe** and click **OK**.
3. When the *Setup* window appears click **Next**.
4. Click **Finish** to restart *Windows* when the *InstallShield Wizard Complete* box appears.
5. You may check **Sounds and Audio Device** control panel (**Start** Menu and point to **Settings** and click **Control Panel** then double-click the **Sounds and Audio Devices** icon - **Sounds, Speech and Audio Devices** category) and adjust the device volume slider to preview. You will see the **Sound Effect Manager** appear in the **taskbar** alongside the date.

Sound Volume Adjustment

How high the sound volume can be set using the volume control knob depends on the setting of the volume control within ***Windows***. Click the **Speaker** icon on the taskbar (Or go to **Start>Programs>Accessories>Entertainment>Volume Control**) to check the setting.

All peripherals must be connected before you turn on the system.

Video (WinXP)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\Video\Setup.exe** and click **OK**.
3. When the *Welcome* screen appears press **Next** > **Yes**.
4. Click the **Express** button (Click **Continue Anyway** if asked if you want to continue at any time).
5. Click **Finish** to restart *Windows* when the *Setup Complete* box appears.

LAN (Win XP)

1. If you can see the **My Computer** icon on your desktop (if you cannot see the **My Computer** icon go to **step 2**) click on it once to select it, then right-click it to make the sub-menu appear, scroll down to **Properties** and click on it (go to **step 3**).
2. If you cannot see the **My Computer** icon click **Start** (menu), then point to (but don't click just highlight it) **My Computer.** Right-click it to make the sub-menu appear, scroll down to **Properties** and click on it (go to **step 3**).
3. Click the **Hardware** (tab), then click **Device Manager** (button).
4. Click "+" next to **Network adapters** (if its sub items are not shown).
5. Double-click **Realtek RTL8139 Family PCI Fast Ethernet NIC** and click **Driver** (tab).
6. Click **Update Driver** (button).
7. When the *Hardware Update Wizard* appears, click **"Install from a list or specific location (Advanced)"**, then click **Next**.
8. Select **"Search for the best driver in these locations"** and select ONLY **"Include this location in the search:"**.
9. Navigate (**Browse...**) to **D:\Drivers\LAN\WinXP** and click **OK** (button), then click **Next.**
10. Click **Finish** and close the open windows.
11. The network adapter is now ready for configuration.

Modem (WinXP)

1. If you can see the **My Computer** icon on your desktop (if you cannot see the **My Computer** icon go to **step 2**) click on it once to select it, then right-click it to make the sub-menu appear, scroll down to **Properties** and click on it (go to **step 3**).
2. If you cannot see the **My Computer** icon click **Start** (menu), then point to (but don't click just highlight it) **My Computer.** Right-click it to make the sub-menu appear, scroll down to **Properties** and click on it (go to **step 3**).
3. Click the **Hardware** (tab), then click **Device Manager** (button).
4. Click "+" next to **Other devices** (if its sub-items are not shown).
5. Double-click **PCI Modem** and click **Reinstall Driver** (button).
6. When the *Hardware Update Wizard* appears, click **"Install from a list or specific location (Advanced)"** then click **Next**.
7. Select **"Search for the best driver in these locations:"** and select ONLY **"Include this location in the search:"**.
8. Navigate (**Browse**...) to **D:\Drivers\Modem\WinXP** and click **OK**, then click **Next** (Click **Continue Anyway** if asked if you want to continue at any time).
9. Click **Finish** and close the open windows.
10. Your modem is now ready for dial-up configuration.

Modem Country Selection

Be sure to check if the modem country selection is appropriate for you. (**Control Panel** >**Modem Settings** (icon) > **Country**).

Wireless LAN (WinXP)

1. Click **Start** (menu) > **Run...**
2. Navigate (**Browse..**) to **D:\Drivers\WLAN\SETUP.EXE** and click **OK**.
3. Click **Next > Yes**.
4. When the installation is finished, click **Finish** to restart your computer.

Chapter 5: BIOS Utilities

Overview

This chapter gives a brief introduction to the computer's built-in software:

Diagnostics: the *POST* (Power-On Self Test)

Configuration:the *Setup* utility
If your computer has never been set up, or you are making important changes to the system (e.g. hard disk setup), then you should review this chapter first and note the original settings found in *Setup*. Even if you are a beginner, keep a record of the settings you find and any changes you make. This information could be useful if your system ever needs servicing.

There is one general rule: ***Don't make any changes unless you are sure of what you are doing***. Many of the settings are required by the system, and changing them could cause it to become unstable or worse. If you have any doubts, consult your service representative.

BIOS Settings Warning

Incorrect settings can cause your system to malfunction. To correct mistakes, return to Set-up and restore the Set-up Defaults with <**F9**>.

Important BIOS Settings

Generally speaking you should not have to adjust any of the BIOS settings as they will already be set for your computer. However the following is a quick reference to the most important settings you may need to change at some point.

Table 5 - 1
Important BIOS Settings

Option	Page #	Purpose
Installed OS	5 - 10	Tells the computer which Operating System you have installed (WinMe, Win98SE, Win2k/ WinXP = **PNP O/S**).
Boot Menu	5 - 17	Specifies the order of the devices on which the computer searches for an Operating System as it starts up.

The Power-On Self Test (POST)

Each time you turn on the computer, the system takes a few seconds to conduct a POST, including a quick test of the on-board RAM.

As the POST proceeds, the computer will tell you if there is anything wrong. If there is a problem which prevents the system from booting, it will display a system summary and prompt you to run Setup.

If there are no problems, the **Setup** prompt will disappear and the system will load the operating system. Once that starts, you can't get into **Setup** without rebooting.

POST Screen

Post Screen

1.BIOS information
2.CPU type
3.Memory status
4.HDD identification notice
5.Enter Setup prompt appears only during POST

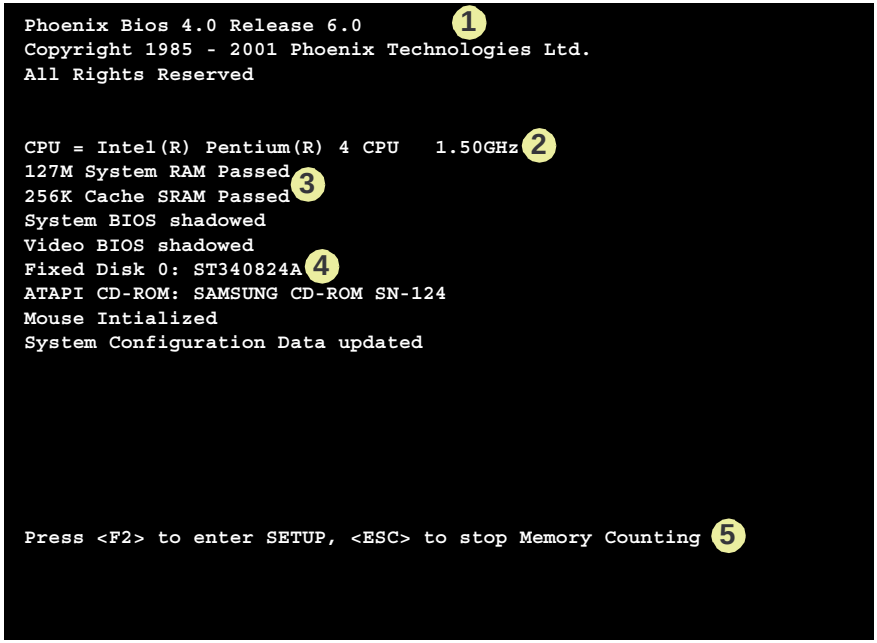


Figure 5 - 1
Post Screen

Failing the POST

Errors can be detected during the POST. There are two categories, “fatal” and “non-fatal”.

Fatal Errors

These stop the boot process and usually indicate there is something seriously wrong with your system. Take the computer to your service representative or authorized service center as soon as possible.

Non-Fatal Errors

This kind of error still allows you to boot. You will get a message identifying the problem (make a note of this message!) followed by the prompt:

- Press <F1> to resume,
- <F2> to enter Setup

Press **F1** to see if the boot process can continue. It may work, without the correct configuration.

Press **F2** to run the Setup program and try to correct the problem. If you still get an error message after you change the setting, or if the “cure” seems even worse, call for help.

The Setup Program

The P**hoenix Setup** program tells the system how to configure itself and manage basic features and subsystems (e.g. port configuration and power management).

Entering Setup

To enter *Setup*, turn on the computer and press **F2** during the **POST**. The prompt seen in **Figure 5 - 1** is usually present for a few seconds after you turn on the system. If you get a "Keyboard Error" (usually because you pressed **F2** too quickly) just press **F2** again.

If the computer is already on, reboot using the **Ctrl + Alt + Delete** combination and then hold down **F2** when prompted. *Setup's* main menu will appear.

Setup Screens

The following pages contain additional advice on **portions** of the *Setup*. The *Setup* interface looks like a "windows" screen:

Along the top of the screen is a menu bar with six (6) menu headings. When you select a heading, a new screen appears. Scroll through the features listed on each screen to make changes to *Setup*.

Instructions on how to navigate each screen are in the box along the bottom of the screen. If these tools are confusing, press **F1** to call up a General Help screen. Then use the arrow keys to scroll up or down this page.

The "**Item Specific Help**" on the right side of each screen explains the highlighted item and has useful messages about its options.

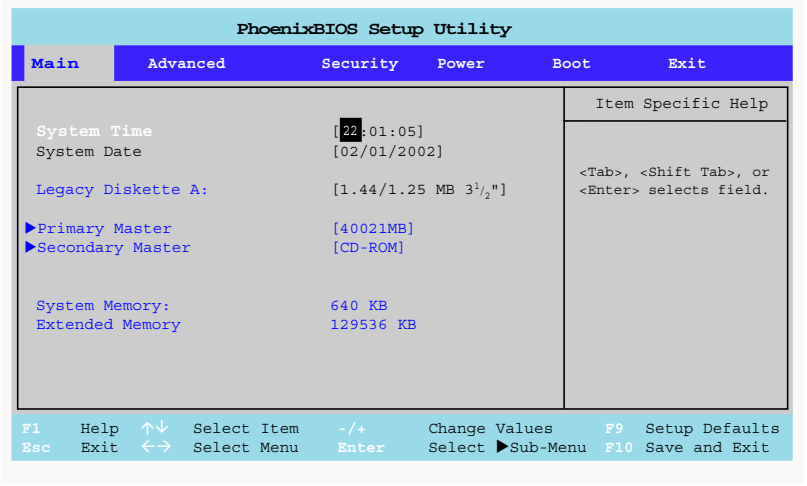
If you see an arrow ("▶") next to an item, press **Enter** to go to a sub-menu on that subject. The sub-menu screen which appears has a similar layout but the **Enter** key may execute a command.

Setup Menus

The Setup menus shown in this section are for reference only. Your computer's menus will indicate the configuration appropriate for your model and options.

Main Menu

Figure 5 - 2
Main Menu



System Time & Date (Main Menu)
The hour setting uses the 24-hour system (i.e., ØØ = midnight; 13 = 1 pm). If you can change the date and time settings in your operating system, you will also change these settings. Some applications may also alter data files to reflect these changes.

Legacy Diskette A: (Main Menu)
This control "enables" the floppy disk drive.

Primary Master (Main Menu)
Information on the main IDE HDD which fits into the computer's HDD bay.

Secondary Master & Secondary Slave (Main Menu)
Information on the secondary IDE device, usually your CD device.

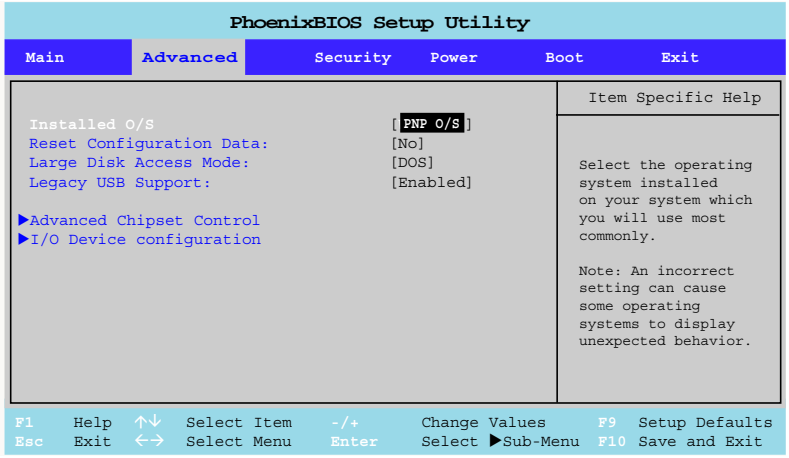
Switching Hard Disks

Every time you install a different hard disk in the computer, it should be (re)configured, unless Auto is selected.

The Auto feature may provide a different set of parameters for the same hard disk at different times. However, it should be reconfigured with the same parameters you got the first time. If you use a different set of parameters, it may be impossible for you to read any data on the hard disk.

Advanced Menu

Figure 5 - 3
Advanced Menu


PhoenixBIOS Setup Utility
Main
Advanced
Security
Power
Boot
Exit
Item Specific Help
Installed O/S [PNP O/S]
Reset Configuration Data: [No]
Large Disk Access Mode: [DOS]
Legacy USB Support: [Enabled]
▶Advanced Chipset Control
▶I/O Device configuration
Select the operating system installed on your system which you will use most commonly.
Note: An incorrect setting can cause some operating systems to display unexpected behavior.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub-Menu F10 Save and Exit

Installed O/S (Advanced Menu)
This setting tells the computer what kind of operating system you're using: *Windows 98*, *Windows Me*, *Windows 2000* and *Windows XP* are all Plug'n'Play (PNP) OS's. **If you are installing a new OS then be sure you select the appropriate setting for your OS**.

Reset Configuration Data: (Advanced Menu)
If you want to clear the **Extended System Configuration Data** (ESCD) area then select 'Yes' here. The default setting is 'No' and you will probably never need to change this. ESCD provides information to the BIOS and OS for communicating with non-PnP plug-in devices. When the computer starts the BIOS records in the ESCD information about how older devices are to be configured.

Large Disk Access Mode: (Advanced Menu)
Select 'Other' if you are using systems such as *Novell*, *UNIX* etc. The default setting 'DOS' is the default setting if you are using *Windows*.

Legacy USB Support: (Advanced Menu)
Choose "**Enabled**" if you intend to use **USB** devices in systems which do not normally support USB functionality (e.g. *DOS*). The default setting is "Disabled" and does not need to be changed if you intend to use your USB devices in *Windows*.

Advanced Menu > Advanced Chipset Control

Graphics Aperture

This feature was import for older graphics cards in the past, which typically had only 4MB or 8MB of onboard memory. However, most modern AGP graphics cards have 32MB or more, so this setting is now of much less importance. In most cases you are unlikely to need to set the AGP aperture at more than 32MB.

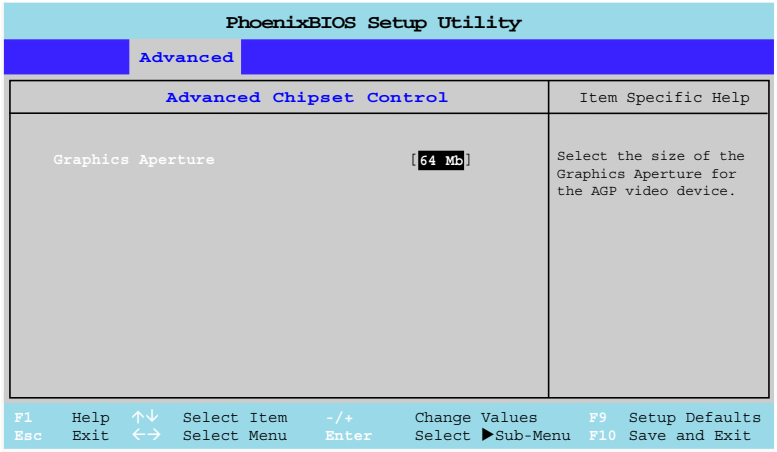

PhoenixBIOS Setup Utility
Advanced
Advanced Chipset Control
Item Specific Help
Graphics Aperture
[64 Mb]
Select the size of the Graphics Aperture for the AGP video device.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub-Menu F10 Save and Exit

Figure 5 - 4
Advanced Chipset Control

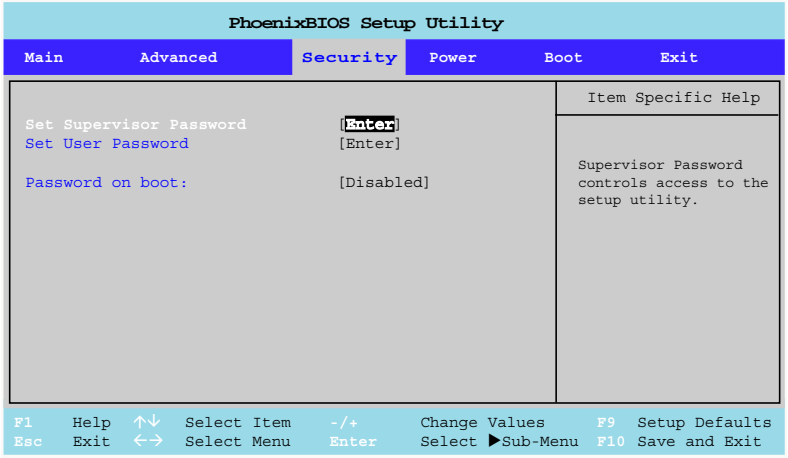
Graphics Aperture (Advanced Menu > Advanced Chipset Control)
The AGP aperture is an area of system RAM reserved for use by the AGP card for storing textures if it needs to. The RAM is available for use by the system as normal if not used by the graphics card.

I/O Device Configuration (Advanced Menu)

The sub-menus under this line include options to configure the **Parallel (Printer) port**, and the **serial (Mouse)**. These can be left to the default settings, however you may wish to use certain devices (e.g. a printer) which require settings to be adjusted accordingly. Check the documentation for any such devices to see what settings are required.

Security Menu

Figure 5 - 5
Security Menu



Security Menu

The changes you make here affect the access to the *Setup* utility itself, and also access to your machine as it boots up after you turn it on. These settings do not affect your machine or network passwords which will be set in your software OS.

Supervisor Password is: (Security Menu)
Set a password for access to the *Setup* utility (this will not affect access to the computer OS, only the *Setup* utility). You can set the user password from the sub-menu (*Set User Password*) after you have set the supervisor password.

Password on boot: (Security Menu)
Set a password for booting the computer. Only users who enter a correct password can boot the system (**See "Warning" in the sidebar**).

Password Warning

If you set a boot password, **NEVER** forget your password.
The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Application Note

Some applications will automatically save data for you if they are set up properly.

Power Menu

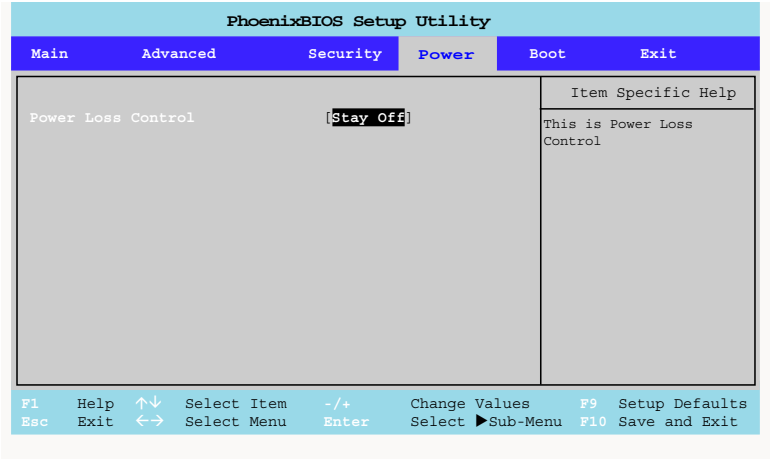


Figure 5 - 6
Power Menu

Power Loss Control (Power Menu)

Here you may set what happens to your machine after a loss of power (e.g. due to a power cut). When power resumes the computer can either stay off, power on, or return to the same power state it was in when the power loss occurred (e.g. if the machine was off it will remain so, if it was on it will turn on again). In any case data which was not saved prior to the power loss cannot be recovered. The default setting is “Stay Off”.

Boot Menu

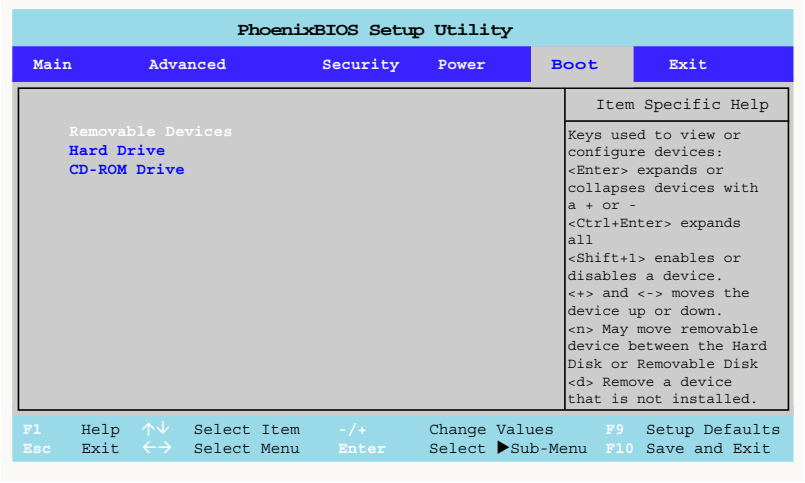

PhoenixBIOS Setup Utility
Main
Advanced
Security
Power
Boot
Exit
Item Specific Help
Removable Devices
Hard Drive
CD-ROM Drive
Keys used to view or configure devices:
<Enter> expands or collapses devices with a + or -
<Ctrl+Enter> expands all
<Shift+1> enables or disables a device.
<+> and <-> moves the device up or down.
<n> May move removable device between the Hard Disk or Removable Disk
<d> Remove a device that is not installed.
F1 Help ↑↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶Sub-Menu F10 Save and Exit

Figure 5 - 7
Boot Menu

Boot Menu

When you turn the computer on it will look for an operating system (e.g *Windows XP*) from the devices listed in this menu, and **in this order**. If it cannot find the operating system on that device, it will try to load it from the next device in the order specified in the Boot Menu. The default setting is “1. Removable Devices, 2. Hard Drive, 3. CD-ROM Drive”.

Boot devices usually are hard drives, floppy drives, CD-ROMs, and network cards.

When you specify a device as a boot device on the Boot Menu, it requires the availability of an operating system on that device. Most PCs come with an operating system already installed on hard-drive "**C**:".

If you wish to boot from a CD-ROM you will need to add it to the boot order. As a general rule the order below is recommended:

1. Removable Devices (usually floppy disks)
2. CD-ROM Drive
3. Hard Drive

In everyday use you will usually boot from the Hard Drive, however there may be occasions when it is advantageous to boot from a floppy disk or CD-ROM.

Exit Menu

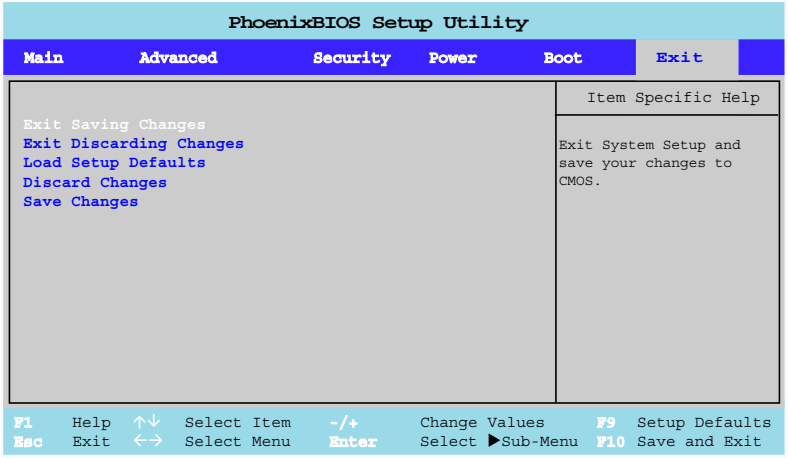


Figure 5 - 8
Exit Menu

5

Exit Menu

Choosing to ‘Discard Changes” or “Exit Discarding Changes” will wipe out any changes you have made to the *Setup*. You can also choose to restore the original “Setup Defaults” which will return the Setup to its original state and erase any previous changes you have made in a previous session.

Chapter 6: Upgrading The Computer

Overview

This chapter contains the information on upgrading the computer. Follow the steps outlined to make the desired upgrades. If you have any trouble or problems you can contact your service representative for further help. Before you begin you will need:

- A small crosshead or Phillips screwdriver
- A small regular screw driver
- An antistatic wrist strap

Before working with or repairing the internal components you will need to wear an antistatic wrist strap to ground yourself because static electricity may damage the components.

The chapter includes:

- Upgrading the HDD
- Upgrading the System Memory

Please make sure that you review each procedure before you perform it. Replacing components involves the same procedure as upgrading them.

Warranty Warning

Please check with your service representative before undertaking any upgrade procedures to find out if this will VOID your warranty.

When Not to Upgrade

These procedures involve opening the system's case, adding and sometimes replacing parts.
You should **not** perform any of these upgrades if:

- your system is still under warranty or a service contract
- you don't have all the necessary equipment
- you're not in the correct environment
- you doubt your abilities

Under any of these conditions, contact your service representative to purchase or replace the component(s).

Hard Disk Drive Upgrade

The hard disk drive is used to store your data internally in the computer. It is mounted at the left side and can be taken out to accommodate other 3.5” IDE hard disk drives of the same or higher capacity.

Upgrading The Hard Disk

1. Unplug the power cord and disconnect all peripheral cables (including the phone line) from the computer.
2. Turn **off** the computer and turn it around so that you may comfortably access the left side.
3. Remove screw “**1**” from the HDD Bay “**2**”.

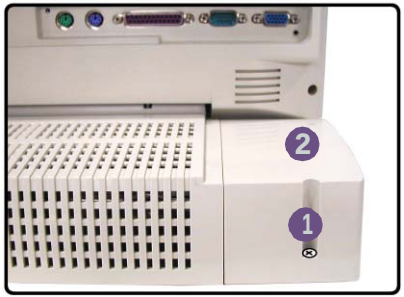


Figure 6 - 1
Hard Disk Bay

4. Pull the HDD assembly out from the bay and disconnect the IDE cable "**1**", and power cable "**2**".

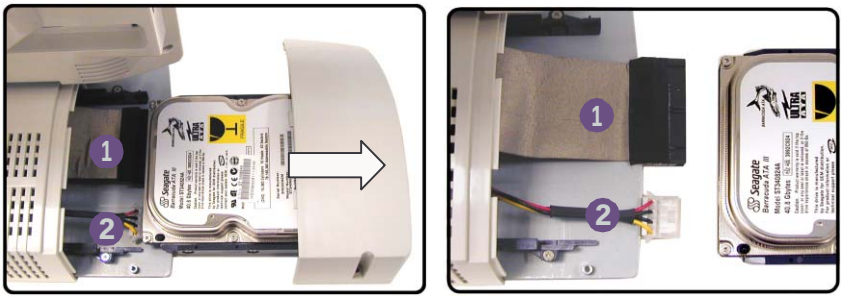


Figure 6 - 2
Hard Disk Bay Removal

5. Turn the assembly over and remove screws ("**3**" - "**6**") holding the assembly to the bay cover.

Figure 6 - 3
4 Hard Disk Bay Screws

6. Remove screws "**1**" - "**6**" holding the hard disk to the case, and slide the hard disk out.

Figure 6 - 4
6 Hard Disk Case Screws

7. Insert the new hard disk, and reverse the removal procedures to install the new hard disk.

HDD System Warning

New HDD's are blank. Before you begin make sure:

You have backed up any data you want to keep from your old HDD.
You have all the CD-ROM's and FDD's required to install your operating system and programs.
If you have access to the internet, download the latest application and hardware driver updates for the operating system you plan to install. Copy these to a removable medium.

Some Things To Watch Out For

Software

Allow the system to auto-detect the new HDD, or if necessary, run the *Setup Utility* in the *BIOS* to customize the system (**"Main Menu" on page 5 - 8**).

Setting Up A New HDD

Follow your operating system's installation instructions and install all necessary drivers and utilities as outlined in **"Install Order" on page 4 - 4**.

System Memory Upgrade

The computer can accommodate up to 1GB of memory in two DIMM sockets. It supports 64/128/256/512MB modules of 200/266MHz DDR memory.

Upgrading the Memory

1. Unplug the power cord and disconnect all peripheral cables (including the phone line) from the computer.
2. Turn **off** the computer.
3. Place the computer with its LCD display facing down on a clean, dry, level surface.
4. Remove screws "**1**"-"**8**" from the rear of the computer

.

Warranty Warning

Note that the procedure to upgrade or replace the memory involves extensive disassembly of the system. We strongly recommend that you do not upgrade/replace the system memory yourself. Please contact your service representative for assistance.

Figure 6 - 5
Rear Case Screws

5. Carefully remove the rear cover "**1**" and set it aside.

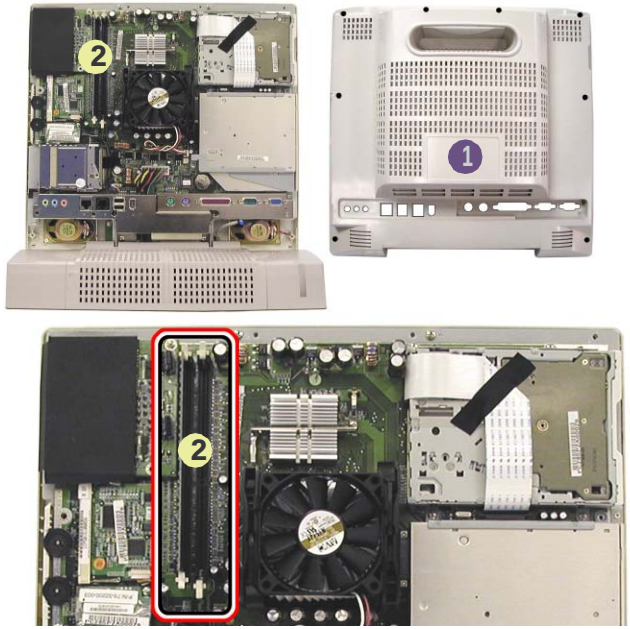


Figure 6 - 6
Rear Case Removed

6. The memory sockets will now be visible at point "**2**" on the mainboard.

7. For each module you want to replace, carefully pull the two latches ("**1**" and "**2**") toward the sides of the socket to release the module.

8. The module will "pop-up" slightly, and you may remove it.

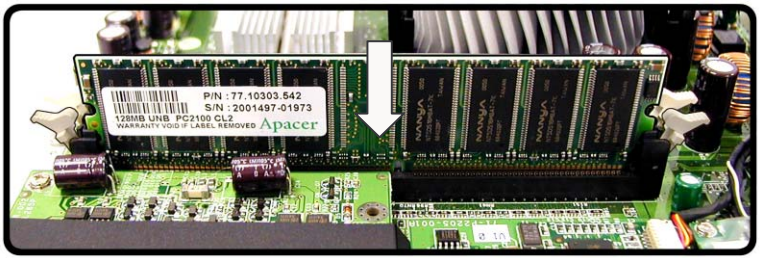
Contact Warning

Be careful not to touch the metal pins on the module's connecting edge. Even the cleanest hands have oils which can attract particles, and degrade the module's performance.

Figure 6 - 7
RAM Module Removal

9. Insert the new module. The module will only fit one way as defined by the pin alignment.
10. Make sure the module is seated as far into the slot as it will go (DO NOT FORCE IT). The latches will click into place on the sides of the module. Make sure they are secure.

Figure 6 - 8
RAM Module Insertion



11. Reverse the procedures to put the computer back together, and do not forget all the screws. When you restart the computer the new memory configuration should be registered.
12. If the system doesn't properly detect the new memory, **and you are sure they are properly "seated"**, you may need to run the setup utility.

Chapter 7: Troubleshooting

Overview

Should you have any problems with your computer, before consulting the service center, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions. This can't anticipate every problem, but you should check here before you panic. If you don't find the answer in these pages, make sure you have followed the instructions carefully and observed the safety precautions in the preface. If all else fails, talk to your service center. You should also make a record of what happened and what remedies you tried.

Of course, if something goes wrong, it will happen at the most inconvenient time possible, so you should preview this section just in case. If, after you've tried everything, and the system still won't cooperate, try turning it off for a few minutes and then rebooting. You will lose any unsaved data, but it may start working again. Then call your service representative.

Basic Hints and Tips

Many of the following may seem obvious but they are often the solution to a problem when your computer appears not to be working.

- ***Power:*** Is the computer actually plugged into a working electrical outlet? If plugged into a **power strip**, make sure it is actually working.

- ***Connections:*** Check all the **cables** to make sure that there are no **lose connections** anywhere.

- ***Power Savings:*** Make sure that the system is not in **Hibernate** or **Standby** mode by pressing the power button for less than 4 seconds (the power LED will flash orange while in **Standby** mode, in Hibernate mode it will be off).

•***Connections:*** Check the brightness of the screen by adjusting the **LCD Brightness Control Knob** (**"Right View" on page 1 - 13**).

•***Boot Drive:*** Make sure there are no **floppy disks** in the drive when you start up your machine (this is a common cause of the message "***Invalid system disk - Replace the disk, and then press any key***").

Backup and General Maintenance

- Always **backup** your important data, and keep copies of your *OS* and programs safe, but close to hand. Don't forget to note the ***serial numbers*** if you are storing them out of their original cases e.g. in a CD wallet.

- Run **maintenance programs** on your hard disk and *OS* as often as you can. You may schedule these programs to run at times when you are not using your computer. You can use those which are provided free with your *OS*, or buy the more powerful dedicated programs to do so.

- Write down your passwords and keep them safe (away from your computer). This is especially important if you choose to use a **Startup** password for the *BIOS* (**See "Security Menu" on page 5 - 14**).

- Keep copies of vital **settings files** such as network, dialup settings, mail settings etc. (even if just brief notes).

Viruses

- Install an **Anti-Virus** program and keep the **definitions file** (the file which tells your program which viruses to look for) up to date. New computer viruses are discovered daily, and some of them may seriously harm your computer and cause you to lose data. **Anti-Virus** programs are commercially available and the **definitions file updates** are usually downloadable directly from the internet.

- Be careful when opening e-mail from sources you don't know. **Viruses** are often triggered from within **e-mail attachments** so take care when opening any attached file. You can configure most **Anti-Virus** programs to check all **e-mail attachments**. **Note**: You should also beware of files from people you know as the virus may have infected an **address book** and been automatically forwarded without the person's knowledge.

- Keep a "**Boot Floppy Disk**" (this disk provides basic information which allows you to startup your computer) handy. You may refer to your OS's documentation for instructions on how to make one, and many **Anti-Virus** programs will also provide such a disk (or at least instructions on how to make one).

Warranty

The CPU is not a user serviceable part. Opening the CPU compartment, or accessing the CPU in any way, may violate your warranty.

Unauthorized tampering with the HDD may also violate your warranty.

Upgrading and Adding New Hardware/ Software

- Do not be tempted to make changes to your ***Windows Registry*** unless you are very sure of what you are doing, otherwise you will risk severely damaging your system.

- Please don't open your computer or undertake any repair or upgrade work if you are not comfortable with what you are doing.

- Read the **documentation**. We can assume, since you are reading this, that you are looking at the computer's manual, but what about any new peripheral devices you have just purchased? Many problems are caused by the installation of new hardware and/or software. Always refer to the documentation of any new hardware and/or software, and pay particular attention to files entitled "**READ ME**" or "**READ ME FIRST**".

- When installing a new device always make sure the device is powered on, and in many cases you will need to restart the computer. Always check that all the cables are correctly connected.

- Make sure you have installed the **drivers** for any new hardware you have installed (latest **driver files** are usually available to download from vendor's websites).

- Thoroughly check any **recent changes** you made to your system as these changes may affect one or more system components, or software programs. If possible, go back and undo the change you just made and see if the problem still occurs.

- Don't over complicate things. The less you have to deal with then the easier the source of the problem may be found; ***Example*** - if your computer has many devices plugged into its ports, and a number of programs running, then it will be difficult to determine the cause of a problem. Try disconnecting all of the devices and restarting the computer with all the peripheral devices unplugged. A process of elimination (adding and removing devices and restarting where necessary) will often find the source of a problem, although this may be time consuming).

Display

Nothing appears on screen.

possible cause:	The system is in a power saving mode.
indicator:	The power LED is blinking orange (**Standby**), or is off (**Hibernate**).
solution:	Press the power button for **less than 4** seconds. If the computer does not turn on again then it was most likely shut down, or has no power source. Check the cables, outlets, power strips etc.
solution:	The **screen saver** is activated.
solution:	Press any key or move the mouse to return to your display.

The screen is flickering.

possible cause: The vertical refresh rate is insufficient on your external monitor.

solution: ***1.***Avoid using the Multiple display mode. Use LCD only or CRT only.
2.Switch to a lower resolution and/or fewer colors.
3.Adjust the refresh frequency in the display controls (**“Attaching a Monitor (CRT)” on page 3 - 8**).

The screen images aren’t clear.

possible cause: The viewing angle of the LCD is bad.

indicator: The screen appears shiny or too dim.

solution: Adjust the position of the LCD. LCDs are designed to be viewed “straight on”. If the angle is wrong, you may see glare from the screen’s backlight.

possible cause: The screen is dirty.
indicator: The screen images are blurry.
solution: Clean the screen using a soft, clean **dry** cloth. Many cleaning solutions can damage the LCD surface so you should follow the precautions outlined in the *Preface*. Try to avoid touching the screen itself. Even the cleanest hands can leave oils which attract contaminants.

possible cause: The screen is suffering from **burn-in**.
indicator: The screen has ghost images, even when it's off.
solution: This problem is usually associated with external CRT monitors. Use power saving options (**"Conserving Power Through Individual Components" on page 3 - 16**) to turn off the LCD. You can also use a **screen-saver** which can help protect an attached monitor.

No image appears on the external monitor I have plugged in and powered on.

possible cause: You haven't enabled the other display.
solution: **"Display Options" on page 3 - 9**.

possible cause: You haven't installed the video driver and configured it appropriately from the ***Control Panel***.
solution: See **"Install Order" on page 4 - 4** for instructions on installing the driver, and **"Advanced Video Controls" on page 3 - 2** for instructions on configuring the video driver.

Password Warning

If you choose to set a boot password, **NEVER** forget your password.
The consequences of this could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your hard disk.

Hard Disk Drive (HDD)

The computer takes longer during Startup.

possible cause: Data saved on the hard disk drive may be lost or damaged.

solution: Please operate the scan disk or disk defragmenter to check for any lost or damaged data.

possible cause: The computer is waking up from **Hibernate** mode.

Boot Password

You forget the boot password.

solution: If you forget the password, you may have to discharge the battery of the *CMOS*. Contact your service representative for help.

Floppy Disk Drive (FDD)

The floppy disk drive will not write data to disk.

possible cause: The floppy disk is not formatted.

solution: Format the disk (you may do this by right-clicking the disk icon in *My Computer* in *Windows* and choosing **Format** from the menu). Please remember that this will **erase all data** contained on the floppy disk.

Note: Floppy disks were never intended for long-term data storage, and have a finite lifespan. **Do not** store important files you wish to keep for a long time on floppy disks. As a general rule it is worth reformatting floppy disks regularly.

possible cause: The floppy disk is write-protected.

solution: Undo the protection by moving the write-protect tab on the disk down until it clicks.

possible cause: There is not enough unused space available on the disk.

solution: Use a new disk or delete any unneeded data.

Media Warning

Don't try to remove a floppy disk while the system is accessing it. This may cause the system to "crash".

Sound Volume Adjustment

How high the sound volume can be set using the volume control knob depends on the setting of the volume control within *Windows*. Click the **Speaker** icon on the taskbar to check the setting.

The message *"Invalid system disk - Replace the disk, and then press any key"* appears.

possible cause: The computer is trying to boot from an incorrect floppy disk.

solution: Remove the floppy and insert a correct one, or boot from your hard disk or CD. you will need to restart the computer.

Audio

The sound cannot be heard or the volume is very low.

possible cause: The volume might be set too low.

solution: ***1.***Check the volume control in the ***Sound Control Panel*** in the *Windows* Taskbar.

2.The headphone is plugged into the wrong jack. It should be plugged into the Headphone-Out jack (**"Rear View" on page 1 - 16**).

3.The Volume Control Knob is set too low (**"Volume Control Knob" on page 1 - 14**).

CD Device

The compact disc cannot be read.

possible cause: The compact disc is dirty.

solution: Clean it with a CD-ROM cleaner kit.

The compact disc tray will not open when there is a disc in the tray.

possible cause: The compact disc is not correctly placed in the tray.

solution: Gently try to remove the disc using the emergency eject hole. (**"Loading Compact Discs" on page 2 - 6**)

I cannot change region codes any more using the DVD utility.

possible cause: You have already changed the code the maximum **5** times.

solution: **See "DVD Regional Codes" on page 2 - 8**.

Media Warning

When manually ejecting a CD/DVD disc, DO NOT use a sharpened pencil or similar object which may break, and become lodged in the hole.

A music compact disc can be read while a data disc can not.

possible cause: There may be a problem with the disc hardware or software.

solution: Refer to your operating system manual for more information on the software and make sure you have the correct software installed for running video compact discs/DVD's. If the proper software is properly installed and a problem still exists, contact your service representative about a possible hardware problem.

All compact discs cannot be read.

possible cause: The *Windows* system does not recognize the CD-ROM drive, or the CD-ROM drive is not compatible with other devices.

solution: ***1.***Make sure you have the CD-ROM drive properly installed and configured.

2.The CD-ROM drive is dirty. Clean it with a CD-ROM cleaner kit.

3.There may be a problem with the disc hardware or software. Refer to your operating system manual for more information on the software, and make sure you have the proper software installed for using compact discs. If the correct software is properly installed, contact your service center about a hardware problem.

PC Card

The system cannot recognize the PC card.

possible cause: The PC card is not inserted into the socket or inserted incorrectly.

solution: Remove the card and reinsert it aligning the PC card with the slot. Push the card in until it locks into place.

possible cause: The PC card driver is not installed.

indicator: The system cannot access the card after it is installed.

solution: Please read the documentation which comes with any new external device, and make sure you **install the driver** for it as this will allow you to access any extra functions which come with your device.

possible cause: The PC card or card driver is not compatible with the computer.

possible cause: Please **see Appendix A:"PC Card Sockets" on page A-3** to check the compatibility of your card.

Keyboard and Mouse

Unwelcome numbers appear when typing.

possible cause: The NumLock is turned **ON**.
indicator: The NumLock LED on the keyboard is lit.
solution: Press and release the **NumLock** key.

I have installed a new external Keyboard or mouse but cannot use all of the listed functions.

possible cause: You have not installed the driver to enable any extra functions.
solution: Make sure you read the documentation which comes with any new external device, and make sure you install the driver for it as this will allow you to access any extra functions which come with your device.

Printer

The printer cannot be added to the system or will not work.

possible cause: The printer power is off or the printer is not correctly connected to the computer.

solution: Check all connections and cables and then try to reinstall the driver.

possible cause: The printer is not turned on, or has an internal problem.

solution: Make sure the printer is on. You may refer to the printer's manual for instructions on printing a "self-test" page (a "self-test" page will print regardless of computer connections and is a means of insuring that the printer is actually working).

possible cause: There is no paper in the printer, or the paper is incorrect for the settings designated in your software.

solution: Put more paper in the printer (also fan the paper to make sure it doesn't stick together and cause a paper jam) and check the paper size matches your software's "print" settings.

possible cause: The printer **driver** is not installed or is configured incorrectly.

solution: Check that the printer is properly installed and configured (correct port etc.). Also check that you have installed the latest driver compatible with your *OS* (updated drivers are usually available for download from the printer manufacturer's website).

possible cause: The printer is a network printer and it is not properly connected to the network.

solution: All networks are configured differently so please check with your **network administrator** to get the correct setup.

possible cause:	The **operation mode** for the **parallel port** set in the *BIOS* doesn't correspond with the mode your printer can work with.
solution:	Please check your printer manual to find out which mode your printer uses. Check that the settings in the *BIOS* (**"I/O Device Configuration (Advanced Menu)" on page 5 - 13**) correspond with those indicated in your printer manual.

Appendix A. Specifications

Processor

- Intel Pentium®4 2.0/ 2.2/ 2.4/ 2.5 GHz (400 MHz front side bus)
- CPU Package - (478-pin) FC-PGA2
- 512KB L2 cache (on die)

- Intel Pentium®4 SFF 1.6/ 1.8/ 2.0/ 2.2/ 2.3GHz (400MHz front side bus)
- CPU Package - (478-pin) FC-PGA2
- 512KB L2 cache (on die)

- Intel Pentium®4 1.5/ 1.6/ 1.7/ 1.8 GHz (400 MHz front side bus)
- CPU Package - (478-pin) FC-PGA2
- 256KB L2 cache (on die)

- Intel Celeron® 1.8 GHz (400 MHz front side bus)
- CPU Package - (478-pin) FC-PGA2
- 256KB L2 cache (on die)

Core Logic Chip

- Intel 845

BIOS

- 2MB Flash ROM Phoenix BIOS
- Supports Plug and Play, ACPI 2.0

System Memory

- Two DIMM sockets supporting DDR 200/266 MHz
- Expandable memory up to 1GB (64/128/256/512 DDR DIMM modules)

Video

- ATI Mobility 7-P
- 32MB or 64MB of DDR video memory on board (factory option)
- Integrated 128-bit 2D/3D Graphics Accelerator
  AGP 2.0 with 4x Architecture
  Hardware Motion Compensation, IDCT for DVD Play

LCD

- Color TFT 15” XGA LCD Panel supporting a resolution of 1024*768/ 256K color depth

Audio

- AC97’ 2.2 compatible
- SoundBlaster™ and Windows Sound System™ compatible
- Two Built-In speakers (3W)
- Three audio jacks for headphone-out, line-in, and microphone-in

Interface

- One serial port (16550A compatible, 9 pin shell, up to 115Kbps)
- One parallel port (25pin shell, SPP/Bi-Direction/ECP/EPP mode support)
- One external CRT port (15-pin D-sub) compliant DC1.1
- Two PS/2 ports
- Four USB ports
- One RJ-45 jack for 100M/10M Ethernet LAN
- One RJ-11 port for Modem
- One IEEE 1394 port (Mini-PCI I/F for IEEE 1394 Module option)

PC Card Sockets

- Supports two Type II slots or one Type III PCMCIA slot (CardBus support)

Storage

- One 3.5”, 1.44MB 3-mode Floppy Disk Drive
- One 3.5”, 25.4mm height Hard Disk Drive (Ultra-66/100 I/F Support)
- One bay for the optional 12.7mm height 24X speed ATAPI CD-ROM, or 8X CD-RW, or 8X DVD-ROM, or 8X DVD-ROM & CD-RW Combo.

Modem

- Removable Internal 56K Data/Fax modem (optional)

LAN

- On board 10/100Mbps base auto-detection

Power

- Internal switching power supply
- Full range - AC in 90~264V, 160W

Power Management

- ACPI Support: S1, S3, S4, S5

Support for WFM Ver 2.0

- SMBIOS 2.2, DMI, ACPI, WOL, WOR

Indicators

- LED indicators (HDD/FDD/CD Device activity, Power)

Physical Dimensions

- 384mm (H) * 369 mm (W) * 188mm (D)

Weight

- 8.8Kg

Fan Bearing Type:

- Two ball bearings

Security

- BIOS password
- Kensington Lock

Optional

- IEEE 1394 Module
- MDC Module

Glossary

A

AC (**A**lternating **C**urrent) - The power from a standard household electrical outlet.

adapter - A device that allows compatibility between different equipment. An AC adapter converts AC current to DC current which is needed to operate a computer.

AGP (**A**ccelerated **G**raphics **P**ort) - A high-speed graphics port that provides a direct connection between the display adapter and memory.

application - A program such as a word processor, database or image editor.

B

BIOS (**B**asic **I**nput **O**utput **S**ystem) - An essential set of routines in a PC, which is stored on a chip and provides an interface between the operating system and the hardware.

bit (**b**inary **d**igit) - The smallest unit of information on a machine. If a computer is a 32-bit machine it may mean that its data registers are 32 bits wide or that it uses 32 bits to identify each address in memory.

boot - The loading of the operating system and other basic software which occurs when you start-up the computer.
bus - A collection of wires through which data is transmitted from one part of a computer to another.
byte (**b**ina**y** **te**rm) - A unit of storage capable of holding a single character. On almost all modern computers, a byte is equal to 8 bits.

C

cache - When you cache something you improve the speed of access to it by moving it one stage closer to the CPU.
CardBus - A 32-bit version of the PCMCIA PC Card standard.
CD-ROM (**C**ompact **D**isc **R**ead **O**nly **M**emory) - A format used to store data such as text, graphics or stereo sound. Also refers to the drive which can read this format.
configuration - The makeup of a system. To “configure” is to choose options in order to create a custom system.
CPU (**C**entral **P**rocessing **U**nit) - The computing part of the computer. It controls the interpretation and execution of instructions.

D

DC (**D**irect **C**urrent) - Power which a computer requires for operation.

DIP switch - A series of tiny switches built into circuit boards which enable you to configure a circuit board for a particular type of computer or application.

DOS (**D**isk **O**perating **S**ystem) - Developed by Microsoft, it was the standard operating system for IBM-compatible personal computers.

DRAM - The most common type of computer RAM, called D-RAM or DRAM.

driver - A program that controls a device. Every device, whether it is a printer, disk drive, or keyboard, must have a driver program.

DVD - Originally called Digital Video Disc since it was used mostly for video, now called Digital Versatile Disc, similar to a CD only with greater storage capacity.

F

flash BIOS - BIOS which can be updated.

flash memory - A memory chip that keeps its information even when the computer is powered off. Used in BIOS which can be updated, like the system in your computer.

flash ROM BIOS - see flash BIOS.
function key - The keys F1, F2, … which have specific functions assigned to them. By pressing one of the function keys you can execute certain commands depending on the computer and operating system you are using.

G

GB (**G**iga**b**yte) - A unit of storage, one gigabyte is equal to 1,024 megabytes.

H

Hot key - see **function keys**.

I

interface - Something that connects two separate things. Hardware interface connects the computer to attached hardware such as a printer.
I/O (**I**nput/**Output**) - Term used when your computer needs data entered (input) or has data to go to another source such as a printer or floppy disk (output).
IrDA (**I**nfra**r**ed **D**ata **A**ssociation) - IrDA ports allow a laptop to ex-

change data or use a printer without a cable connection.

J

jack - A connector used primarily to connect external devices to your computer such as a microphone, video source, phone line, etc.
jumper - A metal bridge that closes an electrical circuit. They are sometimes used to configure expansion boards.

K

KB (Kilobyte) - A unit of storage, one kilobyte is equal to 1024 bytes.

L

LAN (**L**ocal **A**rea **N**etwork) - A communications network within a confined physical area. It is made up of servers, workstations, a network operating system and a communications link.
LCD (**L**iquid **C**rystal **D**isplay) - A display technology that uses rod-shaped molecules (liquid crystals) that flow like liquid and bend light.
LED (**L**ight **E**mitting **D**iode) - an electronic device that lights up when electricity is passed through it. The indicator lights on the com-

puter are LEDs.
load - To copy a program from some source, such as a disk or tape, into memory for execution.
Lithium-Ion battery - A type of battery which is ideal for notebook computers because of its light weight and high energy density. Also, lithium-ion batteries do not use poisonous metals, such as lead, mercury or cadmium.

M

MB (Megabyte) - 1,048,576 bytes or 1024 KB.
memory - Area in the computer where information is stored on chips, an example is RAM.
MHz - One MHz represents one million cycles per second. The speed of microprocessors, called the clock speed, is measured in megahertz.
MMX - A type of microprocessor that can handle many common multimedia operations that are normally handled by a separate sound or video card.
mode - An operational state that a system has been switched to.
modem (**mo**dulate-**dem**odulate) - A device that adapts a computer to a telephone line by converting the computer's digital pulses into audio frequencies for the telephone when sending. And the reverse

when receiving a signal from the telephone line.
module - Referring to hardware, a module is a self-contained component.
mouse - The most popular pointing device. It was called a mouse because it more or less resembled one, with the cord being the mouse's tail.

N

NiMH battery - Batteries which are common in notebook computers and contain Nickel-Metal Hydride.

P

parallel port - A socket on a computer used to connect a printer or other parallel device via the computer's parallel interface.
parallel printer - A printer that receives information from a computer one character (letter, number, etc.) at a time.
partition - A reserved part of disk or memory that is set aside for some purpose. New hard disks must be partitioned before they can be formatted for the operating system, this is done with the FDISK utility.
PC Card - See **PCMCIA Card**.

PCMCIA Card - A credit-card sized, removable module for portable computers standardized by PCMCIA. Also known as PC Cards, they are 16-bit devices that are used to attach modems, network adapters, sound cards, radio transceivers, solid-state disks and hard disks to a portable computer. The PC Card is a “plug and play” device, which is configured automatically by the Card Services software.

PCMCIA is an acronym for **P**ersonal **C**omputer **M**emory **C**ard **I**nternational **A**ssociation which is an international standards body and trade association that was founded to establish a standard for connecting peripherals to portable computers.

peripheral - Any external device attached to a computer, such as a printer, disk drive, display monitor, etc.

Plug and Play - The ability to add a new component and have it work without having to perform any technical analysis or procedure.

PnP - see Plug and Play.

POST (**P**ower **O**n **S**elf **T**est) - A series of built-in diagnostics that are performed when the computer is booted.

R

RAM (**R**andom **A**ccess **M**emory) - The memory available to programs, different programs will need more or less RAM depending on what they are doing. RAM is the most common type of memory found in computers.

reboot - To restart a computer.

resume - To restart your computer from suspend mode.

ROM (**R**ead **O**nly **M**emory) - A memory chip that permanently stores instructions and data. Its contents are created at the time of manufacture and cannot be altered. ROM chips are used to store control routines in personal computers (ROM BIOS), peripheral controllers and other electronic equipment.

S

SD (Secure Digital) Memory Cards - SD memory cards are one of a type of next generation memory devices that offer a combination of high storage capacity (currently 16, 32 and 64 MB), fast data transfer rates, flexibility and security in a memory card about the size of a postage stamp. SD memory cards are non-volatile, which means they do not require power to retain the information stored on them. They are solid-state devices, so they have no moving parts to skip or

break down.

SDRAM (**S**ynchronous **DRAM**) - A type of DRAM that can run at much higher clock speeds than conventional memory.

serial port - A socket on a computer used to connect a modem, mouse, scanner or other serial device to the computer.

setup - (1) A utility program which modifies the BIOS.
(2) Assembly and adjustment of a computer's components.
(3) The preparation of the system for normal operation.

Sony Memory Stick - Sony's digital portable storage medium. The Memory Sticks are used for storing and transferring images from digital cameras and digital music players to personal computers and laptops. These will be added to PDAs or data-enabled mobile phones .

S/PDIF - (Sony/Philips Digital Interface Format) output, which allows you to connect your DVD-capable PC to a Dolby AC-3 compatible receiver producing high quality sound.

suspend - To stop an operation with the hard disk turned off and the CPU idling at its slowest speed. This is done to save power when you are not using your computer for long periods of time.

T

TFT (**T**hin **F**ilm **T**ransistor) - The term typically refers to active matrix screens on laptop computers. Active matrix LCD provides a sharper screen display and broader viewing angle compared to passive matrix.

U

USB (**U**niversal **S**erial **B**us) - Hardware interface for low-speed peripherals such as the keyboard, mouse, joystick, scanner, printer and telephony devices. Devices are plugged directly into a four-pin socket on the PC.

utility - A program that provides file management capabilities, such as sorting, copying, comparing, listing and searching, as well as diagnostic and measurement routines that check the health and performance of the system.

V

VGA (**V**ideo **G**raphics **A**rray) - The minimum standard for PC video display.

Z

Zoomed Video (ZV) Port - An extension to the PC Card (PCMCIA) standard that provides a high transfer rate for video applications on portable computers. The ZV Port is built into the notebook computer and activated by plugging in an MPEG PC Card that is ZV Port-compliant.